

**REPORT AND INDEX OF
UNDERWAY MARINE GEOPHYSICAL DATA**

RAPA EXPEDITION

LEG 00

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R/V Thomas Washington

(Issued May 1991)

San Diego, California (4 November 1990)
to
San Diego, California (5 November 1990)

Chief Scientist - Stuart M. Smith (Scripps Institution)

Resident Marine Technician - Ron Comer

Sea Beam/Underway Data Processor - Stuart M. Smith

Post-Cruise Processing and Report Preparation by the
Geological Data Center, Scripps Institution of Oceanography
La Jolla, California 92093

Data Collection and Processing Funded by:
University of California Ship Funds

NOTE: This is an index of underway geophysical data edited
and processed after the completion of the cruise leg and is
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La Jolla, California 92093.

GDC Cruise I.D.# 251

INFORMAL REPORT AND INDEX OF NAVIGATION AND UNDERWAY GEOPHYSICAL DATA

Processed by the Geological Data Center
Scripps Institution of Oceanography

Contents:

Index Chart - gives track of cruise leg, dates, ports, and mileage of each type of data collected.

Track Charts - annotated with dates and hour ticks.

Profiles - depth, magnetic anomaly and gravity free air anomaly vs. distance. Sections of track having subbottom profile (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 92093-0223. Phone (619)534-2752. Fax (619)534-5306.

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 $\frac{2}{3}$ degree beam width) depths retrieved at one minute intervals of ship time.
3. 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.
5. Microfilm or Xerox copies of:
 - a. Echosounder records - 12 and 3.5 kHz frequency
 - b. Subbottom profiler records
 - c. Magnetometer records
 - d. Underway data log book

TO: Tom Hayward, Chair
Marine Operations Committee

7 November 1990

FROM: Stu Smith, Coordinator
R/V Washington November 1990 Test Trip

SUBJECT: Summary of Test Trip Operations (RAPA00WT)

R/V Washington departed Mar Fac at 0920 (PST) on 4 November and returned the following evening at 1820 on a trip for testing ship's equipment and scientific instruments required for the upcoming RAPA expedition.

The ship was cleared to operate in an area bounded by 32-15N to 32-35N and 118-15W to 117-45W except for the part south of the Mexican EEZ which cut through the southeast corner. This area includes the North San Clemente Basin with 2000 meter water depth required for Sea Beam and Sea Marc II tests.

The scheduled 0800 departure was delayed because of the need for SCG techs to get replacement boards for the on-line Vax 730 computer which failed to boot up. Once installed, the on-line (data logging) and off-line computers operated with no problems.

On the transit to the working area stops were made to test the anchor windlass (1 hr) and the starboard hydro winch (1/2 hour). Underway, the magnetometer was deployed and the XBT system checked out as were several seismic streamers and a new watergun sound source.

The navigation logging and DR plot display were operated throughout the trip. GPS coverage was continuous with only 3 or 4 intervals of one half hour with less than 3 satellite GPS fixes.

The Bell gravity meter, recently re-installed on board following the Hildebrand/Zumberge gravity experiment, appeared to operate properly, showing appropriate monitor readings and printout displays.

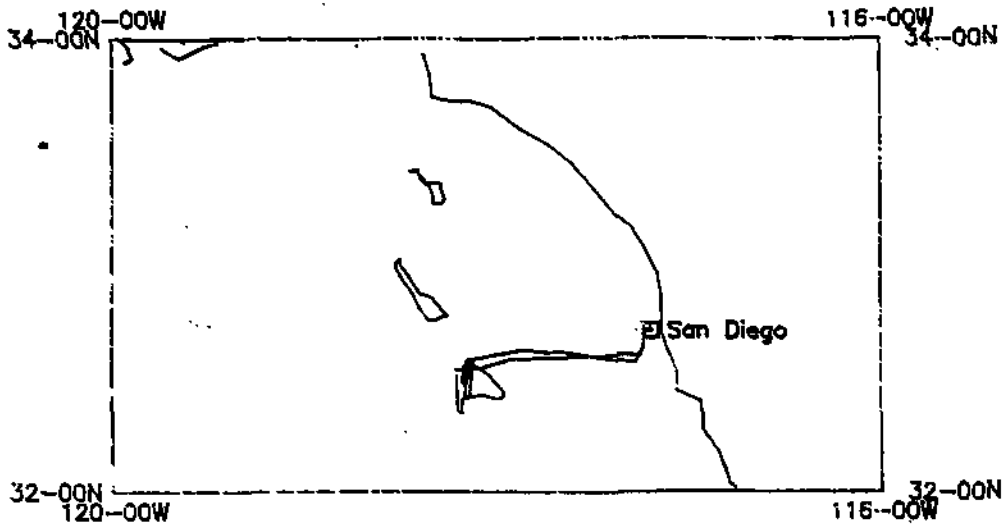
On site, the first Sea Marc II deployment required two hours followed by four hours steaming and two hours for retrieval. Sandy Shor, head of the Sea Marc group, reported all systems checked out except for a hydraulic brake problem which will be fixed in port.

Sea Beam roll bias tests using the three vertical references (Bell gravimeter, Singer gyro and Datawell pendulum) were done for the next six hours in an H pattern with 3 mile long legs over the flat basin floor. Sea Beam performed well in this first test following replacement of cables, projectors and receivers. More adverse conditions than 2000m depth and the nearly flat seas we had during the test trip are required to see how much performance has improved.

Sea Marc was again deployed for 4 hours for more tests of the electronics. Following retrieval, the ship returned to Mar Fac.

The participants all felt that this type of test trip, devoted to equipment testing and not conflicting with scientific data gathering, is very important to do before major expeditions. We urge that these test trips continue to be scheduled in the future.

CC:
Capt. J. Williams Capt. T. Desjardins P. Crampton
C. deMoustier R. Moe G. Shor
S. Shor (HIG) R. Wilson D. Wirth
RAPA Chief Scientists: P. Lonsdale, K. Macdonald (UCSB), J. Orcutt



RAPA EXPEDITION LEG 00

CHIEF SCIENTIST:

Stuart M. Smith (Scripps Institution of Oceanography)

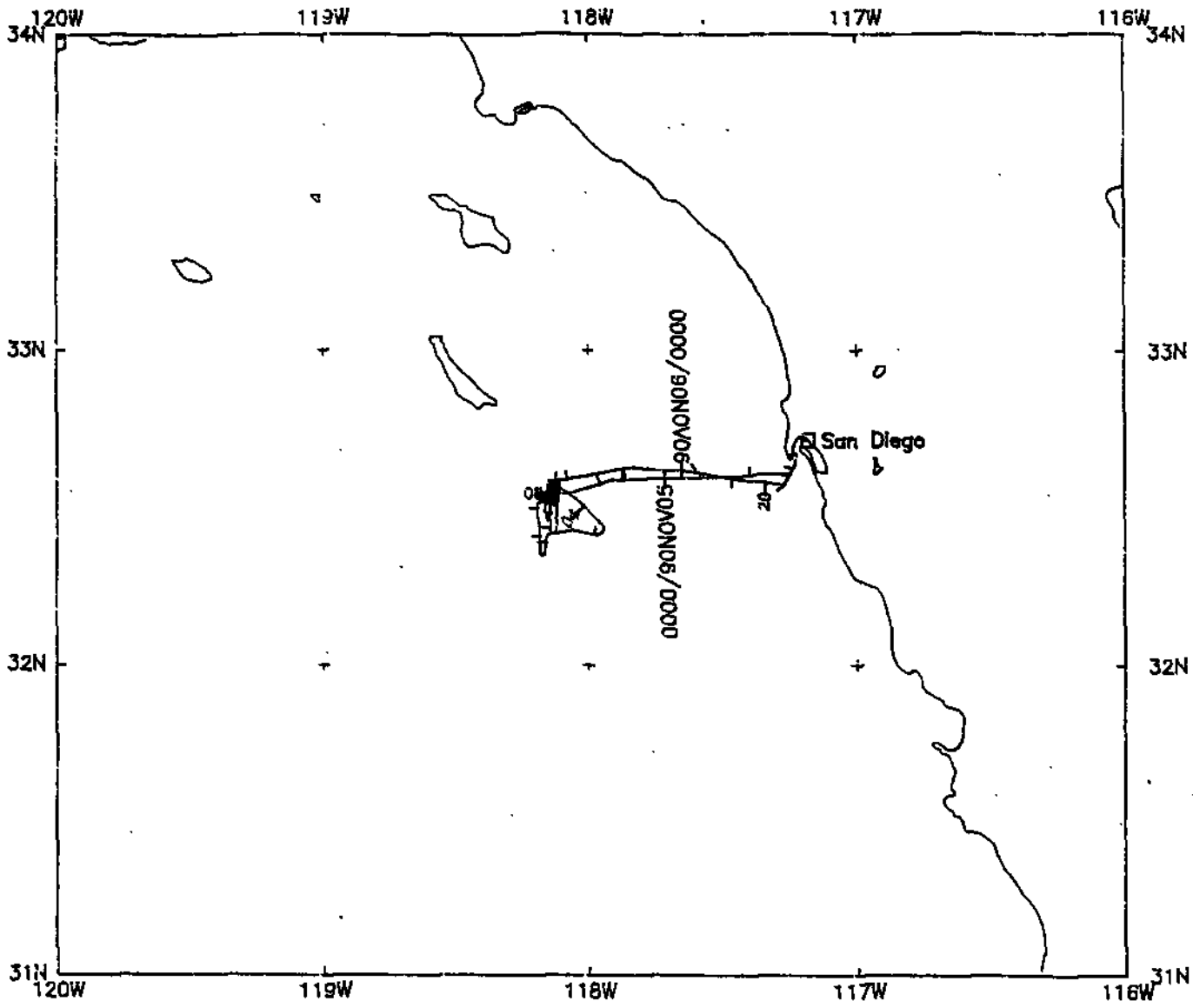
PORTS: San Diego, - San Diego, Calif.

DATES: 4 -5 November 1990

SHIP: R/V T. Washington

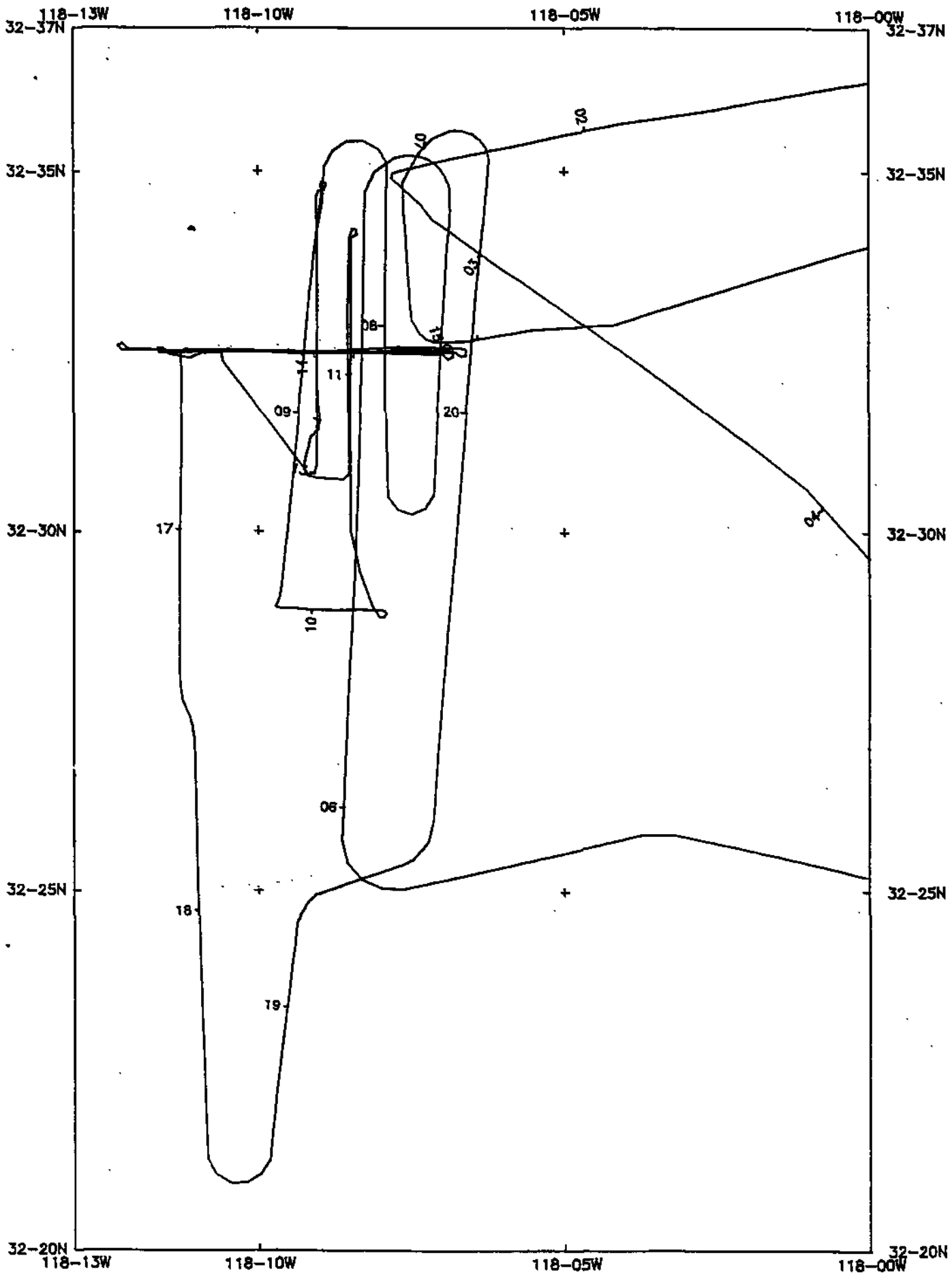
TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

- 1) Cruise - 228 miles
- 2) Bathymetry - 186 miles
- 3) Magnetics - 10 miles
- 4) Seismic Reflection - 10 miles
- 5) Gravity - 228 miles
- 6) Sea Beam - 186 miles
- 7) Sea Marc - 100 miles

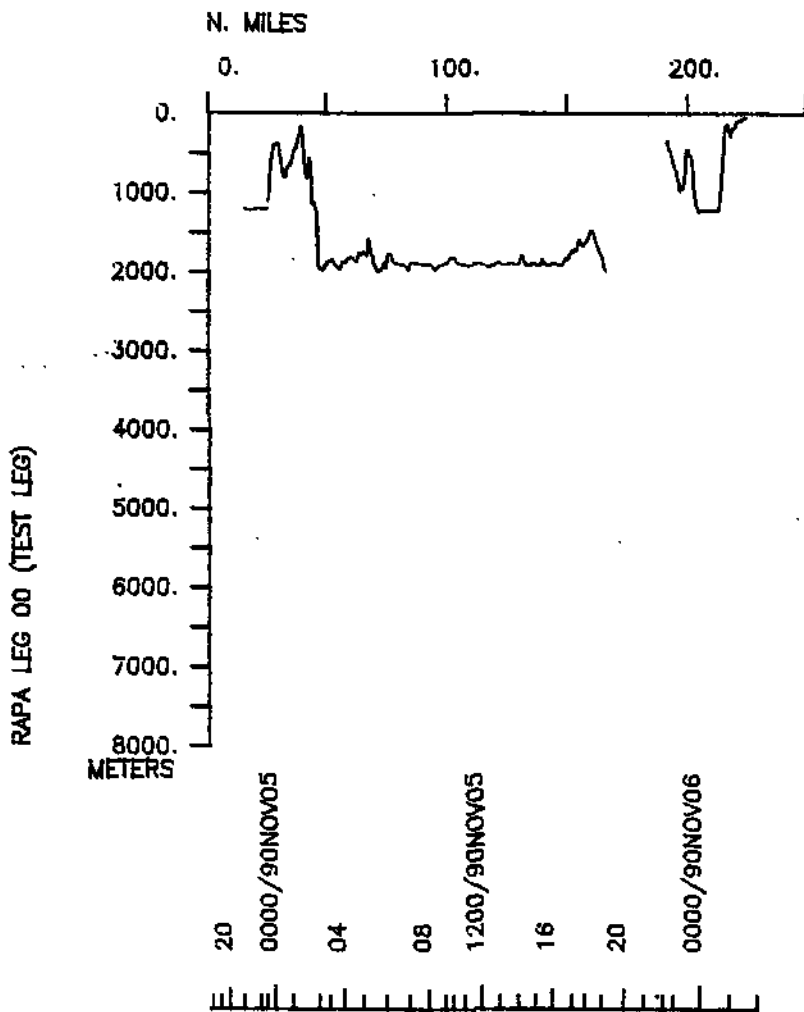
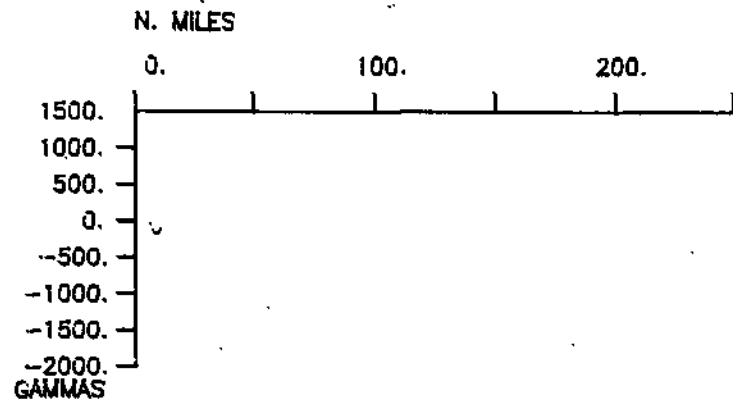
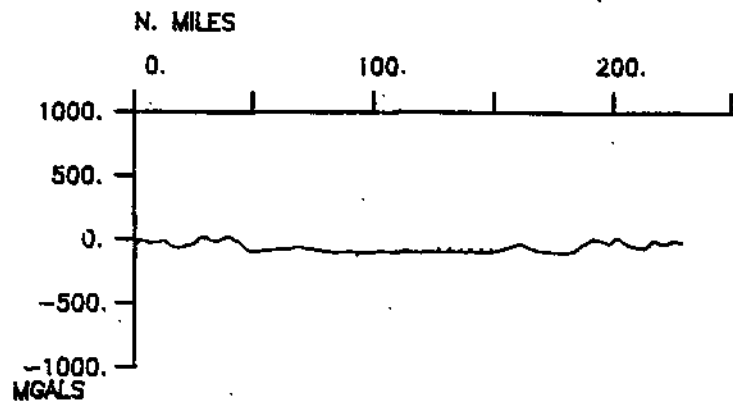


RAPA LEG 00 (Test leg)
(RAPA00WT)

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RAPA LEG 00 (TEST TRIP)



CEAS...

S.I.O. SAMPLE INDEX

(Issued May 1991)

RAPA EXPEDITION

Leg 00

R/V T. Washington

San Diego, California (4 November 1990)
to
San Diego, California (5 November 1990)

Chief Scientist:

Stuart M. Smith (Scripps Institution)

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.# 251

****PORTS****

1720 041190	LGPT B SAN DIEGO, CALIFORNIA	32 43 N 117 11 W	FRAPAOOWT
0220 061190	LGPT E SAN DIEGO, CALIFORNIA	32 43 N 117 11 W	FRAPAOOWT

****PERSONNEL****

#	***NAME***	***TITLE***	***AFFILIATION***	**CRID**
PECT GDC	SMITH, S.M.	CHIEF SCIENTIST	SCRIPPS INSTITUTION	RAPAOOWT
PECT SCG	CHARTERS, J.	COMPUTER TECH	SCRIPPS INSTITUTION	RAPAOOWT
PEBO SCG	MOORE, J.M.	COMPUTER TECH	SCRIPPS INSTITUTION	RAPAOOWT
PEBE SCG	STUBER, D.	SEABEAM ENGINEER	SCRIPPS INSTITUTION	RAPAOOWT
PECT STS	JAIN, J.	ELECTRONIC TECH	SCRIPPS INSTITUTION	RAPAOOWT
PERT STS	COMER, R.	RESIDENT TECH	SCRIPPS INSTITUTION	RAPAOOWT
PERT STS	MOGK, S.	RESIDENT TECH	SCRIPPS INSTITUTION	RAPAOOWT
PEAT SGG	CRAMPTON, P.	AIRGUN TECH	SCRIPPS INSTITUTION	RAPAOOWT
PEAT SGG	HUBENKA, F.	AIRGUN TECH	SCRIPPS INSTITUTION	RAPAOOWT
PESP HIG	SHOR, S.	SCIENTIST	HAWAII INST.GEOPHYSICS	RAPAOOWT
PESP HIG	ERICKSON, J.	ELECTRONICS TECH	HAWAII INST.GEOPHYSICS	RAPAOOWT
PESP HIG	ADKINS, B.	ELECTRONICS TECH	HAWAII INST.GEOPHYSICS	RAPAOOWT
PESP HIG	VALENCIANO, M.	ELECTRONICS TECH	HAWAII INST.GEOPHYSICS	RAPAOOWT
PESP HIG	ZISK, S.	SEAMARC TECH	HAWAII INST.GEOPHYSICS	RAPAOOWT
PESP HIG	DANG, S.	SEAMARC TECH	HAWAII INST.GEOPHYSICS	RAPAOOWT

****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 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.

#GMT	DDMMYY	LOC	T	SAMP	SAMPLE	DISP			CRUISE
#TIME	DATE	TIME	Z	CODE	IDENTIFIER	CODE	LAT.	LONG.	LEG-SHIP

***UNDERWAY DATA CURATOR - S. M. SMITH EXT. 42752

LOG BOOKS

0440	051190			LBUW	B UNDERWAY WATCH LOG	GDC	32-266N	117-567W	sRAPAOOWT
0143	061190			LBUW	E UNDERWAY WATCH LOG	GDC	32-375N	117-143W	sRAPAOOWT

*** ECHO SOUNDER RECORDS ***

1030	051190			MBMR	B SEABEAM MONTIOR R-01	GDC	32-289N	118-079W	sRAPAOOWT
1650	051190			MBMR	E SEABEAM MONTIOR R-01	GDC	32-319N	118-112W	sRAPAOOWT

0300	051190			DPSM	B SEAMARC II TEST	HIG	32-373N	117-412W	sRAPAOOWT
2100	061190			DPSM	E SEAMARC II TEST	HIG	32-323N	118-105W	sRAPAOOWT

*** CONTINUOUS COMPUTER RECORDER GRAVITY ***

1720	041190			GVCR	B GRAVIMETER	GDC	32-389N	117-136W	sRAPAOOWT
0220	061190			GVCR	E GRAVIMETER	GDC	32-404N	117-137W	sRAPAOOWT

#					END SAMPLE INDEX				RAPAOOWT
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