

Lamont - Doherty Geological Observatory | Palisades, N.Y. 10964
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CRUISE REPORT

Ship Name: R/V ROBERT D. CONRAD Cruise No: 20-06

Departure: October 25, 1976 from Yokohama, Japan
Date Port

Arrival: November 30, 1976 at Keelung, Taiwan
Date Port

Days at Sea: 36 Days Foreign Port: 4 3
No. of days in arrival port

Area of Operation: Philippine Sea

Program Description: Geophysical and multi-channel seismic studies of the Philippine Sea transect and South China Sea for the IDOE/CCOP SEATAR project and multi-channel seismic survey of IPOD candidate sites of Mariana arc and Philippine Sea.

Participants: (All L-DGO unless otherwise specified)

Dennis E. Hayes	Chief Scientist
Roger N. Anderson	Co-Chief Scientist
Tse-Kong Kan	MCS observer
Paul Casagrande	Gravity
Robert Crimmins	Core Bosun
Bruce Crowell	E. T.
Daniel Grob	E. T.
Carlos Gutierrez	E. T. (MCS)
David Hill	E. T.
Martin Iltzsche	Mech. Tech.
William Robinson	Elect. Eng. (MCS)
Harry Van Santford	Elect. Eng (MCS)
Greg Walz	E. T.

All inquiries regarding cruise should be made to the chief scientist.

RC 20-06

The CONRAD cruise 20-06 was intended to provide multi-channel seismic information to help determine appropriate IPOD drill site locations around the Mariana arc system, the Parece Vela and W. Philippine Basins. Additionally, under IDOE sponsorship, multi-channel seismic data was collected across the eastern margin of Luzon and across the N. Luzon Ridge in order to investigate contrasts in the style of deformation along this convergent plate boundary.

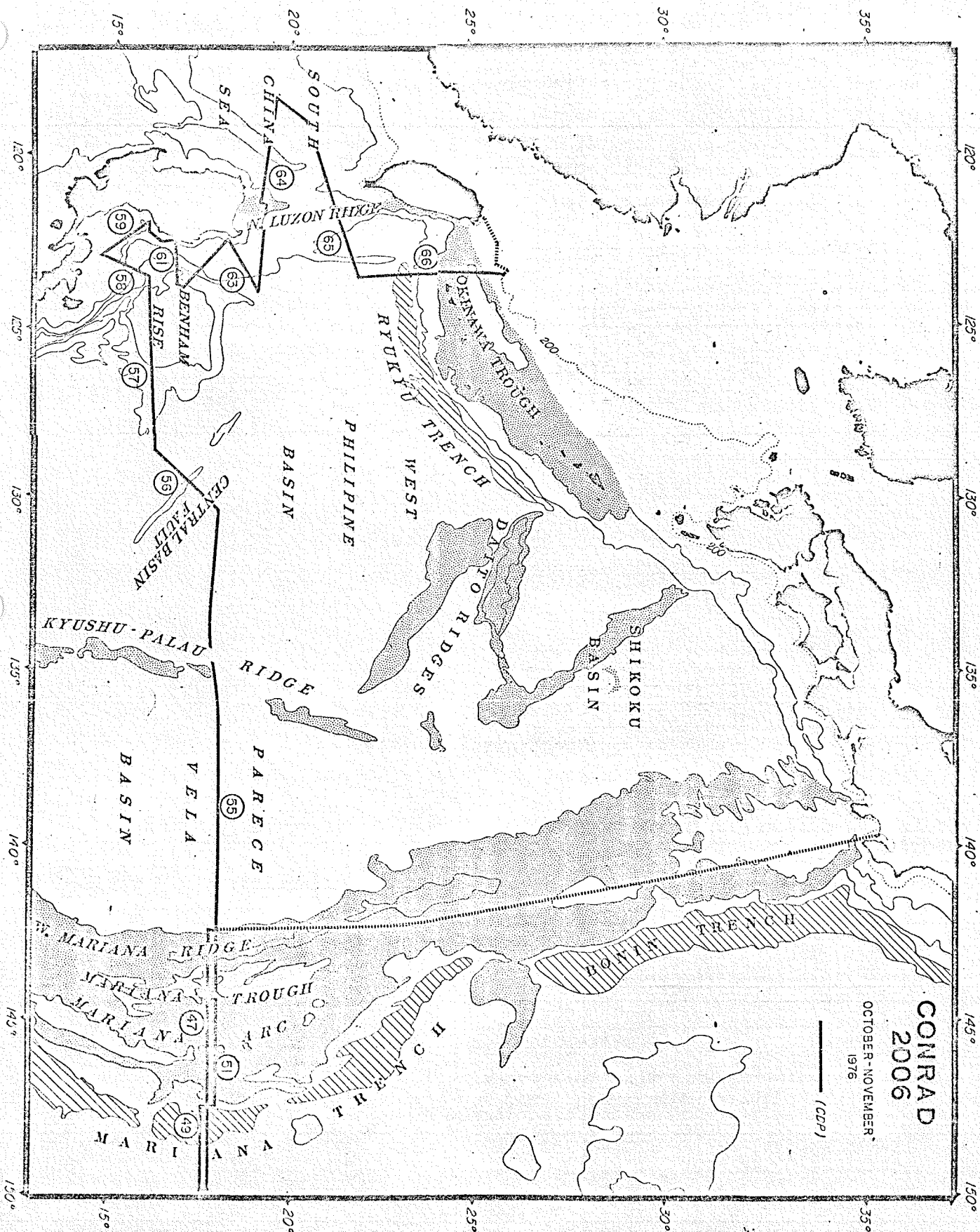
Approximately 3500 n.m. of 24 fold CDP data was collected, ~ 2500 n.m. using two 500 cu in Bolt airguns firing at 2000 psi and 20 sec intervals, ~ 500 n.m. using 4 such guns and ~ 500 n.m. using two 120 cu in guns. About 50 sonobuoys were deployed at strategic locations along the track and at least 35 will yield important structure/velocity information on the crust and in many instances the uppermost mantle.

Deep (>2 sec) normal incidence reflections were recorded on the monitor records of a single seismic channel at many key locales, e.g., the Mariana trough, western margin of the W. Mariana Ridge, W. Philippine Basin, Benham Rise, Luzon margin, S. China Sea Basin, and Okinawa Trough.

Continuous 12 kHz and 3.5 kHz echograms, magnetics, and gravity data were recorded along the track. All data were collected at a nominal cruising speed of 5 knots. A schematic track chart is attached.

Dennis E. Hayes

Chief Scientist, RC 20-06



CRUISE REPORT

SHIP UTILIZATION DATA

SHIP NAME: V ROBERT D. CONRAD	Lamont-Doherty Geological OPERATING INST. Observatory	
CRUISE (LEG) NO. 20-06	DATES 10/25/76 - 12/2/76	
AREA OF OPERATIONS: Philippine Sea	PORT CALLS:	DATES
	Keelung, Taiwan	12/1/76 --
		12/2/76
DAYS AT SEA 37	DAYS IN PORT 2	

PARTICIPATING PERSONNEL		TITLE	AFFILIATION
CODE	NAME		
1	Dennis E. Hayes	Chief Scientist	Lamont-Doherty
2	Roger N. Anderson	Co-Chief Scientist	"
3	Tse-Kong Kan	MCS Observer	"
4	Paul Casagrande	Gravity	"
5	Robert Grimmins	Core Bosun	"
6	Bruce Crowell	E. T.	"

(continue on reverse side)

PRIMARY PROJECTS (those which govern the principal operations, area and movements of the ship)

PROJECT TITLE AND PRINCIPAL INVESTIGATOR	SPONSORING ACTIVITY	GRANT OR CONTRACT NUMBER	AMOUNT	STARTING DATE	DURATION (MOS)	PARTICIPATING PERSONNEL (AS CODED ABOVE)
MCS Survey-Philippine Sea 40% IDOE/CCOP SEATAR project	NSF	OCE 76-23382				
IPOD Philippine Sea 60% Transect Survey D. E. Hayes	NSF	UC/NSF C482-2, Scope G				All

ANCILLARY PROJECTS (which are accomplished on a not-to-interfere basis and contribute to the overall effectiveness of the cruise)

PROJECT TITLE AND PRINCIPAL INVESTIGATOR	SPONSORING ACTIVITY	GRANT OR CONTRACT NUMBER	AMOUNT	STARTING DATE	DURATION (MOS)	PARTICIPATING PERSONNEL (AS CODED ABOVE)

COST ALLOCATION DATA

DAYS CHARGED	AGENCY OR ACTIVITY CHARGED	GRANT OR CONTRACT NO.
39	NSF	OCE 76-00060

SIGNATURE Senior Scientist DATE 22 Dec 76

(Continue personnel and project listings on reverse if additional space needed)

ATTACH PAGE SIZE CRUISE TRACK

SIGNATURE DE Hayes

DATE 22 Dec 76

PARTICIPATING PERSONNEL (cont.)

7.	Daniel Grob	E. T.	Lamont-Doherty
8.	Carlos Gutierrez	E. T. (MCS)	"
9.	David Hill	E. T.	"
10.	Martin Iltzsche	Mech. Tech.	"
11.	William Robinson	Elect. Eng. (MCS)	"
12.	Harry Van Santford	Elect. Eng. (MCS)	"
13.	Greg Walz	E. T.	"