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RESEARCH CRUISE REPORT

R/V ROBERT D. CONRAD 26-13

Attached is a copy of a cruise report for the above CONRAD cruise.


Ann Burns
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Enc.

CONRAD RC-2613 CRUISE REPORT

CONRAD 2613 (November 19 - November 29, 1985) was the second of three legs of the 1985 China Margin Project, a marine geophysical investigation of the passive continental margin along the northern side of the South China Sea between Taiwan and Hai-Nan Tao. Leg 2613 was the second leg of Two-ship ESP/CDP seismic data acquisition. The first leg acquired two-ship seismic data along a transect across the margin at roughly 117.5° E. This leg acquired two-ship data along a similar transect across the margin at about 113° E. The cooperating ship during both legs was the OCEAN-4, from the second Marine Geology Brigade, People's Republic of China, based in Guangzhou (Canton).

CONRAD departed from Hong Kong at about 0830 on November 15 (all times are local). OCEAN-4 departed from Guangzhou at 1100 the same day. The weather was very good, and continued good until November 24. Personnel were transferred at 1730 near the eastern end of ESP 11. PRC personnel aboard CONRAD were: Ye Yaohua, Liu Changju, Tsao Ying, and Wang Junsheng. OCEAN-4 then proceeded to the western end of ESP 11 to deploy air guns and streamer. ESP 11 started at 1100 November 20, with OCEAN-4 shooting and CONRAD recording. All of the RC-2613 ESPs were shot with the ships starting at maximum offset (100 km), crossing in the middle, and continuing on to maximum offset again. In this way, the shooting ship was able to obtain CDP coverage (although coarse) all along the ESP track. The last shot of ESP 11 (L-DGO MCS Line 623...line numbers will be given in parentheses after ESP numbers) was shot at 2000 November 20. The elapsed time of 9 hours was typical for all of the RC-2613 ESPs. At this point, CONRAD deployed air guns and shot MCS Line 625, connecting the western ends of ESPs 11 (623) and 12 (625).

ESP 12 (625) began at 0800, November 21, with OCEAN-4 shooting from NE to

SW, and CONRAD recording on the reciprocal course. The midpoint was reached at 1210 and the last shot fired at 1620. CONRAD again deployed her sound source array and shot MCS Line 262 joining the eastern ends of ESPs 12 and 13.

ESP 13 (627) started at 0130, November 22. The eastern end point of this line was shifted, to avoid shallow water. Both ships reached the midpoint at 0608, and the ESP ended at 1040. CONRAD then shot MCS Line 628, joining the western ends of ESPs 13 and 14.

ESP 14 (629) was begun at 1530, November 22, and finished at 0030, November 23. CONRAD then shot MCS Line 630, connecting the eastern ends of ESPs 14 and 15.

ESP 15 (631) started at 0430, November 23. The midpoint crossing occurred at 0900, and the last shot was fired at 1330. CONRAD again deployed her air guns and shot MCS Line 632, jointing the western ends of ESPs 15 and 16.

ESP 16 (633) began at 1900, November 23, and finished at 0400, November 24. CONRAD then shot MCS Line 634, joining the eastern ends of ESPs 16 and 17. This line was somewhat indirect in route; to give the OCEAN-4 the extra time she needed to reach the western end of ESP 17, a dogleg was introduced into MCS Line 634.

ESPS 17 and 18, as originally planned, were poorly placed, based on new information given us by our PRC colleagues. They were, therefore, combined into ESP 17' (635) which was shot halfway between the original locations of ESPs 17 and 18. As it turned out, this was the last ESP shot during RC-2613. ESP 17' (635) began at 1100, November 24, and ended at 2000. During this ESP, the weather began to worsen. Nevertheless, CONRAD deployed air guns, and shot line 636, down to and past the anticipated western endpoint of ESP 19. Unfortunately, the weather continued bad, and OCEAN-4 was forced to pull gear

and return to port.

CONRAD continued to shoot and record MCS Line 636 toward the SSE until 1400 on the 25th of November. We then tried to profile toward the west, but found it impossible to maintain the streamer depth except while moving in line with the wave troughs. MCS Line 637 was shot, therefore, to the north. At about 0800, November 26, Line 637 was ended, the streamer recovered, and CONRAD headed to port. Magnetometer and PDR profiling were continued until 1030 on the 27th of November. Rendezvous with OCEAN-4 was made that evening, and personnel transferred by boat. Equipment was transferred the following day, in Shekou, and CONRAD anchored in Hong Kong harbor that night.

RC-2613
ESP COORDINATES

<u>ESP</u>	<u>MIDPOINT</u>	<u>EAST END</u>	<u>WEST END</u>
11	20°42.6'N 111°58.6'E	20°55.2' 112°24.0'	20°30.0' 111°33.2'
12	19°53.0' 112°26.0'	20°14.0' 112°44.5'	19°32.0' 112°7.5'
13	19°22.6' 112°43.3'	19°33.0' 113°10.0'	19°10.2' 112°16.6'
14	19°1.6' 112°53.5'	19°13.2' 113°19.5'	18°50.0' 112°27.5'
15	18°44.0' 113°2.6'	18°55.0' 113°28.2'	18°33.0' 112°37.0'
16	18°19.7' 113°16.0'	18°27.0' 113°44.0'	18°12.5' 112°48.0'
17	17°43.5' 113°25.1'	17°57.5' 113°52.2'	17°29.5' 112°58.1'

