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GEOPHYSICAL DATA COLLECTED IN 1984 BY THE
R/V S.P. LEE IN THE MANUS AND NEW IRELAND
REGIONS OF PAPUA NEW GUINEA

by

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Shawn V. Dadisman, and Neville F. Exon

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Over 2,000 km of geophysical data were collected during 1984 in New Guinea (Fig. 1). The cruise was the fourth leg of the TRIPARTITE (Australia, New Zealand and U.S.A.) CCOP/SOPAC (United Nations-sponsored Committee for Coordination of Joint Prospecting for Mineral Resources in South Pacific Offshore Areas) survey of the south Pacific by the R/V S.P. Lee. Preliminary results of the survey are reported in Marlow and Exon (1985), and the full details of the cruise are published in Marlow, Dadisman, and Exon (1988).

The geophysical data include 24-channel seismic-reflection (both migrated and unmigrated), ship's track navigation, bathymetric, free-air gravity and total-field magnetic profiles collected on 24 separate track lines. Explanation of data collection, processing and display are presented on the side labels of each profile. Each track line has three panels of profiles: the first panel consists of the ship's track, bathymetric profiles, free-air gravity anomalies, and total field magnetic anomalies; the second panel is the multichannel seismic-reflection data for each trackline, processed through to a stacked, deconvolved and filtered section; the third panel is the multichannel seismic-reflection data processed through to a stacked, migrated, deconvolved,

and filtered section. The order of processing was stacking, migration (on the third panel), deconvolution, bandpass filtering, and automatic gain control (AGC). Migration velocities are either 1,400 or 1,500 m/sec, as detailed on profile side labels. Migrated, seismic-reflection sections are included to show a better geometric representation of the geology.

Copies of the data may be obtained from:

National Geophysical Data Center
325 Broadway
Boulder COLORADO 80303 U.S.A.

Bureau of Mineral Resources
GPO Box 378
CANBERRA CITY ACT 2601 AUSTRALIA

REFERENCES

- Marlow, M. S., and Exon, N. F., 1985, Basin development and regional tectonics of the New Ireland and Manus regions: Extended Abstracts: Petroleum Geology of South Pacific Island Countries, Australia Bureau of Mineral Resources Record 1985/32, p. 11-17
- Marlow, M. S., Dadisman, S. V., and Exon, N. F., editors, 1988, Geology Manus regions, Papua New Guinea: Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series, v. 9, Houston, Texas, 265 p.

