GEOLOGY AND OFFSHORE RESOURCES OF PACIFIC ISLAND ARCS—NEW IRELAND AND MANUS REGION, PAPUA NEW GUINEA
GEOLGY AND OFFSHORE RESOURCES OF PACIFIC ISLAND ARCS—NEW IRELAND AND MANUS REGION, PAPUA NEW GUINEA

Edited By

Michael S. Marlow, Shawn V. Dadisman, and Neville F. Exon

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This volume reports the results of one of fourteen internationally sponsored surveys to investigate the energy and mineral resources in the Southwest Pacific. The 1982, 1984 and 1986 surveys were fostered by the Australia-New Zealand-United States Tripartite Agreement. Geophysical and geological data were collected aboard the U.S. Geological Survey's (USGS) R/V S.P. Lee and the Hawaii Institute of Geophysics' (HIG) R/V Kana Keoki and R/V Moana Wave in the waters of Fiji, Kiribati, Papua New Guinea, Solomon Islands, Tonga, Western Samoa, and Vanuatu.

Funding for ship time was made available through the U.S. Agency for International Development, the USGS, the U.S. Office of Naval Research (for HIG's 1982 work), the Australian Development Assistance Bureau, and the New Zealand Ministry of Foreign Affairs. Coordination of the program was provided by the U.S. Department of State and the United Nations-sponsored Committee for Coordination of Joint Prospecting for Mineral Resources in South Pacific Offshore Areas (CCOP/SOPAC). Over 150 scientists and technicians participated in the cruises and represented the South Pacific island nations and funding countries mentioned above, as well as CCOP/SOPAC, New Caledonia, the United Kingdom and France.

Michel T. Halbouty

Chairman and President
The scientific results presented in this volume are part of a major collaboration of the U.S. Geological Survey (USGS) with government geological agencies of Australia, New Zealand, and nations in the South Pacific to investigate the geology and to evaluate potential oil, gas, and mineral resources of the Circum-Pacific region.

This collaboration began in 1982 with SOPAC Tripartite I which investigated the potential for offshore oil and gas resources in Solomon Islands, Tonga, and Vanuatu and was responsible for spearheading renewed resource-oriented marine geological and geophysical exploration in the Pacific. The joint surveys were continued in 1984 as SOPAC Tripartite II, which is part of a larger USGS program (Operation Deep Sweep) designed, in part, to investigate the Exclusive Economic Zones of United States territories in the Pacific and to study other selected parts of the Pacific with an international team composed primarily of scientists from the Tripartite countries.

The studies reported in this volume are beneficial to the Australia, New Zealand, and United States geoscientific research partners and the member countries of the United Nations-sponsored Committee for Co-ordination of Joint Prospecting for Mineral Resources in South Pacific Offshore Areas (CCOP/SOPAC). The benefits to the participating groups include obtaining a comprehensive update and evaluation of the Pacific Basin energy and mineral resources; assisting developing nations of the Pacific in assessing their potential resources; providing scientists of the participating countries an opportunity to study analogous geologic provinces and then develop models, hypotheses and theories that will be useful in unravelling complex geologic problems in their home waters; and bringing together a team of international scientists that work cooperatively in sharing information and ideas that are germane to the scientific understanding of the Circum-Pacific geology. The benefits of this work to the general geoscientific community are also great as new information about remote areas of the Pacific is being added to our knowledge and understanding of geology and geologic processes worldwide. Results of other investigations that are part of Operation Deep Sweep are, or will be, reported in other volumes of the Earth Science Series of the Circum-Pacific Council for Energy and Mineral Resources.

Dallas Peck
Director, U.S. Geological Survey
The research recorded here is a major contribution by the countries in the CCOP/SOPAC region and by the wider international community to the understanding of the natural resource potential and the geological origin and significance of the seabed of national Exclusive Economic Zones (EEZ) and the oceanic areas of the South Pacific. At the same time, it is an outstanding example of international partnership and co-operation, with mutual benefits to all concerned.

CCOP/SOPAC warmly welcomes the success of this collaborative enterprise, and, on behalf of the member governments and its Technical Secretariat, I wish to place on record our sincere appreciation for the very generous contribution by the Tripartite Partners—the governments of Australia, New Zealand, and the United States—and by the Circum-Pacific Council for Energy and Mineral Resources.

Jioji Kotobalavu
Director
CCOP/SOPAC Technical Secretariat
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