PERGAMON

Journal of Asian Earth Sciences 18 (2000) 253

Journal of Asian Earth Sciences

Preface

Lithosphere Dynamics and Natural Resources in Indochina and Adjacent Areas

Geological studies of East Indochina and the adjacent areas, including southeastern China and the South China Sea, have recently attracted much attention. This is not only because of the hydrocarbon potential of the area and its mineral deposits, but also because of the spectacular geological features which record the consequences of the Cenozoic collision of the India and Asian continents, the most significant Cenozoic tectonic event on the Earth's surface. This setting makes Indochina an ideal "natural laboratory" for scientists studying the geological consequences of collision/extrusion tectonics.

In order to better understand the style and timing of the tectonic events and their role in the evolution of basins and formation of mineral deposits, an international symposium, the "International Symposium on Lithosphere Dynamics of East Asia" was held in Taipei from 19 April to 23 April, 1996. The Symposium was a successful timely response to the growing interest in this region. It created an open forum for interaction among scientists of various disciplines. In the discussion sessions, speakers presented a great deal of recently collected geological and geophysical data from this region and discussed models of lithosphere dynamics in response to collision/extrusion/extension tectonics, and possible links to regional tectonics and natural resources.

This special issue is a collection of seven papers presented in the Symposium. A glance through the table of contents shows the diversity of approaches required to study lithospheric dynamics in this region. The first paper presenting the results of geophysical studies by Tsai and Wu, discusses the lithospheric structure of South China and Indochina on the basis of S-wave velocity data. A systematic geochemical and isotopic study of granitic rocks in Vietnam, presented by Lan et al., provides evidence for the episodic growth of the continent of Indochina. On the basis of thermochronological data, Wang et al. discuss the onset of the left-lateral movement along the Ailaoshan–Red River shear zone and its implications to the opening of the South China Sea and the southeastward extrusion of Indochina. After the Asia–India collision, the Asian continent has experienced a number of extension and rifting episodes within the continent and/or along its margin since the late Mesozoic. These lithosphere extension events have not only induced a huge amount of magmatic activity in the region, as discussed by Li and Ho et al., but also resulted in the development of marginal basins, such as those in the East China Sea, described by Kong et al. In the final paper, Fan compiles the geological data related to mineral deposits of Vietnam and discusses the possible connections between tectonic events and types of mineral deposits in the Indochina region.

We are indebted to the following reviewers whose efforts ensured the outstanding quality of these papers: Fritz Finger, Martin Flower, Charles Hutchison, John Jeffers, Shu-kun Hsu, Honn Kao, Ching-ying Lan, Chao-shine Lee, Teh-Quei Lee, Xian-Hua Li, Zhengxiang Li, Walter Mooney, Ian Norton, Claude Rangin, Jean-Claude Sibuet, and Alan Smith. We would also like to thank Jennifer Lytwyn and Chin-Ho Tsai for their kind assistance in editing the special issue.

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PII: S1367-9120(99)00057-7