Continental Transpressional and Transtensional Tectonics

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Contents

Preface

This volume contains a broad spectrum of papers that summarize recent advances in the understanding of continental transpressional and transtensional tectonics. The papers include theoretical and case studies from a global set of contributors. The volume contains 22 papers. The opening contribution by **Dewey *et al.*** is an overview of the basic features of transpressional and transtensional deformation zones aimed at setting the scene for the more detailed papers to follow. These are grouped into four sections. The first, Modelling Transpression and Transtension, includes a series of papers which discuss theoretical strain models in the context of field examples and analogue experiments (**Fossen & Tikoff**, **Jones & Holdsworth**, **Lin *et al.*** and **Schreus & Colletta**).

The second section details the tectonic evolution of Continental Transform Zones and includes papers on the Dead Sea Transform (**Butler *et al.***), the San Francisco Bay area (**Tavarnelli**), the Transverse Ranges of southern California (**Rust**), the Atacama Fault System of Chile (**Rjeiis & McClay**) and a lithosphere-scale view of the San Andreas fault system (**Teyssier & Tikoff**).

The third section is entitled Oblique Divergence Zones. The first two papers are concerned with transtensional structures developed during gravitational collapse in the Caledonides of western Norway (**Krabbendam & Dewey**) and in southwestern North America (**Dokka *et al.***). The two following papers describe the transtensional structures developed in South Africa during break-up of Gondwana (**Watkeys & Soukoutis**) and the evolution of the combined pull-apart/transtensional Bonai Basin, northern China (**Allen *et al.***).

The fourth section is concerned with Oblique Convergence Zones and includes case studies from the Precambrian basement of Brazil (**Ebert & Hasui**), the European Variscides (**Gayer *et al.***, **Gleizes *et al.*** and **Tanner *et al.***), the Permo-Triassic Gondwanian orogen of west Antarctica (**Curtis**), the Himalayas (**Searle *et al.***) and the Sierra Nevada batholith (**St Blanquat *et al.***), and concludes with a discussion of Quaternary tectonics in southern Italy (**Shiatterella**).

The impetus for this volume was a conference held in March 1997 at Burlington House, London, under the auspices of the Tectonic Studies Group of the Geological Society of London. The editors would like to thank all the staff at Burlington House who helped ensure the smooth running of the conference, including projection facilities and refreshments.

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