Fine-Grained Sediments: Deep-Water Processes and Facies

Fine-Grained Sediments: Deep-Water Processes and Facies

edited by

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Preface

This volume has been edited from the proceedings and discussion at an *International Workshop on Fine-Grained Sediments* held at Dalhousie University, Halifax, Canada, in August 1982, and co-sponsored by the *Geological Society of London* and the *Geological Association of Canada*. Additional contributions have been solicited to provide a more comprehensive publication, although we have retained the original narrow remit of the research meeting. This focused on modern and ancient, siliciclastic and biogenic, fine-grained sediments from a range of deep-water environments. We aimed to limit the scope of our discussions so that advances in understanding resulting in a useful synthesis might be achieved, but to leave the scope sufficiently broad that valuable cross-fertilization of ideas could take place. We hope that the result will be helpful to many research sedimentologists as a state-of-the-art summary of a large and important class of rocks.

The volume contains thirty-eight separate papers, including short regional contributions and longer review papers, organized into nine sections. There is a short introduction to the history, methodology and terminology of fine-grained sediment studies. This is followed by a more substantive section dealing with processes of erosion, transport and deposition in deep-water. There are then sections on each of the main facies types including siliciclastic turbidites, carbonate turbidites, contourites, mixed (mainly hemipelagic) facies of slopes and slope basins, pelagites and organic-carbon-rich sediments. A section on internal characteristics covers plasticity and compaction, mud and shale fabric, and bioturbation. Our final synthesis paper on facies models attempts to relate fine-grained sediment facies to depositional processes and deep-water environments.

Each paper has been reviewed by at least two external referees as well as by the editors. In editing, we have not aimed for rigorous uniformity of style or terminology, as this was clearly not possible given the different approaches and persuasions of the seventy-five authors and co-authors who have contributed.

Finally, our thanks to the many people who helped to make possible this publication: to all the participants at the meeting and to the contributors who were unable to attend; to Phil Hill, Tony Bowen and Martin Gibling for their help with the organization and running of the Halifax workshop; to those who refereed papers; to our respective institutions for secretarial, drafting and technical support; to the Natural Environment Research Council, UK, the Canadian Natural Sciences and Engineering Research Council, Dalhousie University, the Geological Survey of Canada, and to our sponsoring organizations for support; and to Nigel Palmer and Jane Grisdale of Blackwell Scientific Publications for their patient and diligent work.

Dorrik A.V. Stow, David J.W. Piper
August 1983