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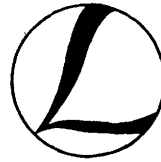
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Introduction

M. A. Cooper & G. D. Williams

This volume contains a selection of papers presented at the Inversion Tectonics Meeting held at the Royal Society on 3–4 March 1987. Two of the papers, those by Hayward & Graham, and Morley, were not actually presented at the meeting as the contributors were unable to attend. Six of the papers presented were not submitted in manuscript form for inclusion; however, we have included the abstracts at the end of the volume.

The volume has been divided into four sections: Modelling and Theoretical Concepts, Inversion in the Alps and Alpine Foreland, Inversion on the European Continental Shelf, and Inversion in Other Geological Environments. At the end we have included a general discussion on the usage and definition of inversion that comprises some editorial thoughts and discussion contributions made at the meeting.

In the first section, Modelling and Theoretical Concepts, Williams *et al.* discuss the analysis of inversion structures using the concept of the null point. Hayward & Graham introduce many of the characteristic features of inversion structures illustrated by examples from W Europe. The section is concluded by McClay who presents the results of modelling inversion using sand/clay interlayered models.

The second section, Inversion in the Alps and Alpine Foreland, contains strongly contrasting views on the usage of the concept of inversion. Ziegler presents a comprehensive review of inversion in NW Europe which is applied to the Alpine orogenic belt by de Graciansky *et al.* and by Butler. The paper by Simpson *et al.* briefly discusses inversion in the Wessex Basin based

on extensive exploration data. The final paper by Roberts extends the effect of the inversion far further to the west and north than is traditionally accepted.

The third section, Inversion on the European Continental Shelf, deals with 'traditional' inversion illustrated by seismic data from the Danish section of the North Sea by Cartwright, the Western Approaches by Chapman and the southern North Sea by Badley *et al.*

The fourth and final section, Inversion in Other Geological Environments, discusses the application of the concepts of inversion to areas in which the reactivation of pre-existing structures is demonstrable but complex. Powell & Williams describe the extensional collapse of the Lewis Thrust sheet in the Rockies of NW Montana. McClay *et al.* present evidence for inversion of Devonian half-grabens in the Canadian Rockies. An example of inversion in the Scandinavian Caledonides is documented by Morley, and Coward *et al.* discuss inversion related to movements on the Great Glen Fault in the Devonian of N Scotland. In the final paper, Daly *et al.* describe how reactivation of fundamental basement lineaments controlled the geometry of the East African Rift system.

This collection of papers thus provides a very broad spectrum of examples of inversion tectonics which goes beyond the traditional usage of the term. This reflects the current range of research on inversion problems and whilst this generates some controversy (see discussion) we believe that there is value in illustrating the whole of current usage.

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