

# Preface

This book outlines the reasons why Nares Strait is considered to be one of the most important structural elements in Arctic geology. The origin of the Strait is central to plate tectonic models concerned with the origin of the North Atlantic and Arctic Oceans. The basic conflict elucidated in this volume has had a long and complicated history and the ideas and theories presented by F. B. Taylor, A. Wegener, S. W. Carey and J. Tuzo Wilson involving Nares Strait have been foremost in influencing geological thought on global tectonics.

It is clear that understanding of a geological structure of the magnitude and importance of Nares Strait, forming as it does a national boundary between Canada and Greenland, requires close international cooperation. This was achieved by the Nares Strait symposium held at Halifax in May 1980, of which this book is the outcome. All those who have debated the nature of Nares Strait through the years have been united in their wish for more geological information from this isolated and poorly known region. In recent years, however, the problem of remoteness has been overcome by increased exploration with more efficient logistic support and by international cooperation. Thus, the present volume presents a wealth of new information from Greenland, Canada and Nares Strait itself, and these data contribute greatly to the primary objective of examining the history and origin of the Strait. We stress, however, that much remains to be done to achieve a full understanding and uniform map presentation of the onshore and offshore geology of the Nares Strait region. One of the most serious deficits, the lack of offshore geophysical work in the central and northern parts of Nares Strait, is an important target for future activity.

It is not necessary to emphasise the significance of

Nares Strait and plate tectonic models based upon it in terms of hydrocarbon exploration, at a time when petroleum exploration is advancing further north, both onshore and on the continental shelves of the Arctic and North Atlantic Oceans. In particular, solving the Nares Strait controversy has a crucial bearing on our understanding of the origin and evolution of Baffin Bay and the Labrador Sea. These two seas contain large sedimentary basins in Canadian and Danish-Greenlandic territory, where petroleum assessment and exploration is currently being actively undertaken.

We are pleased to see the part played in this venture by geological and geophysical operations initiated by our respective organisations, although we also note the major contributions by specialists from other institutions who share a common interest in the Arctic. The many papers jointly authored by scientists based in Canada and Denmark are a most welcome indication of increased international cooperation across our mutual frontier.

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