

Review of Survey activities 2006

Edited by

Martin Sønderholm and A.K. Higgins

Geological Survey of Denmark and Greenland Bulletin 13

Keywords

Geological Survey of Denmark and Greenland, survey organisations, current research, Denmark, Greenland.

Cover photographs from left to right

1. Study of potentially gold-bearing Archaean supracrustal rocks south-west of the Isua supracrustal belt, southern West Greenland. Photo: Adam A. Garde.
2. Detailed surveying of the coastal zone is an important task during construction of e.g. harbours, bridges and man-made beach resorts. Photo: Merete Binderup.
3. Drilling of the ENRECA-2 well on the Vietnamese island of Phu Quoc. The well encountered a 500 m thick Lower Cretaceous fluvial sandstone unit that is widely distributed in the area including onshore Cambodia. The formation constitutes a potential reservoir for hydrocarbon and freshwater in the area. Photo: Lars Henrik Nielsen.
4. Mapping of hydraulic fractures induced for enhanced treatment of contaminated soil at the Kluzcewo Airport in Poland. The activities were carried out in connection with the FP6 project STRESOIL sponsored by the EU. Photo: Tomasz Kasela.

Frontispiece: facing page

Study of oil seeps in basalts on the south-western shores of Nuussuaq, West Greenland during an excursion in 2004. Petroleum exploration offshore West Greenland is now going into a new phase after the licensing rounds in 2006 and 2007 where seven new licences were awarded. Photo: Martin Sønderholm.

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Illustrations: Stefan Sølberg with contributions from Jette Halskov and Christian Rasmussen

Lay-out and graphic production: Annabeth Andersen

Printers: Schultz Grafisk, Albertslund, Denmark

Manuscripts submitted: 2–19 February 2007

Final versions approved: 14 August 2007

Printed: 12 October 2007

ISSN 1603-9769 (Review of Survey activities)

ISSN 1604-8156 (Geological Survey of Denmark and Greenland Bulletin)

ISBN 978-87-7871-202-8

Available from

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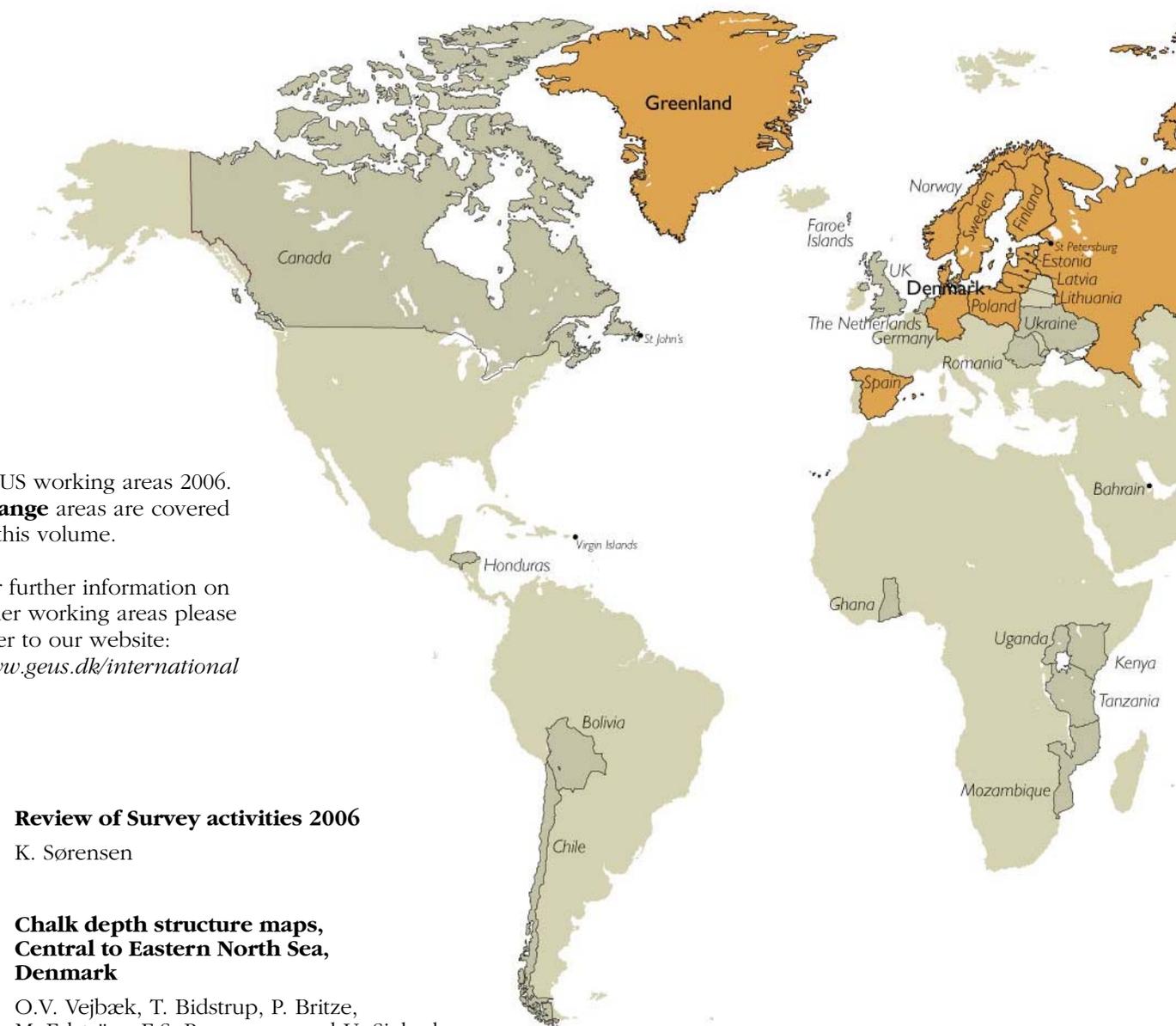
or

Geografforlaget ApS, Filsofgangen 24,1., DK-5000 Odense C, Denmark
Phone: +45 63 44 16 83, fax: +45 63 44 16 97, e-mail: go@geografforlaget.dk

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GEUS working areas 2006.
Orange areas are covered
in this volume.

For further information on
other working areas please
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Review of Survey activities 2006

Kai Sørensen

Director

The Geological Survey of Denmark and Greenland (GEUS) has lived through a period of intense unrest during most of 2006. This was a consequence of the decision by the Danish Government in 2005 to carry out a major reorganisation of the Danish research world. The aim was to improve the quality and competitiveness of Danish universities and research organisations (such as GEUS), by means of a fusion of universities and the merging of independent research institutions with the universities. At the conclusion of this process all but three of the major government research institutions were merged with the universities in Århus and Copenhagen, and the Technical University in Lyngby. For many reasons, one being the special tasks that GEUS is responsible for in Greenland, the Government decided that GEUS should continue as one of these three independent national research institutions.

This issue of Review of Survey activities (RoSa) is the fourth published after it was decided to publish an annual research overview illustrating the activities of GEUS in Denmark, Greenland and other countries building on a long-standing tradition of a Greenland review publication. Although only approximately a third of our institution's turnover is related to Greenland, no less than 34 papers out of the 73 published in the four issues of RoSa (including this one) relate to Greenland activities. Greenland thus continues to be a potent measure of scientific productivity at GEUS, and it is deeply satisfying to acknowledge the dedication to the geology of Greenland as one of the major factors that helped secure the independence of the Survey.

Although this issue of Review of Survey activities presents 17 papers providing a panorama of the current research carried out at GEUS, it illustrates only a small part of the wide range of projects undertaken in Denmark and Greenland and other countries in 2006. A factual overview of the activities of GEUS as a whole can be seen on the GEUS website.

In the present volume, three papers deal with various aspects of petroleum exploration in the Danish part of the North Sea. One of these papers links exploration for deep

groundwater aquifers onshore Denmark with offshore petroleum exploration. Another paper from Denmark is devoted to recent environmental changes during the Roman Warm Period.

In Greenland, exploration activities for both minerals and petroleum have reached unprecedented highs during 2006. This is reflected by the nine papers dealing with projects related to Greenland. Three papers are concerned with petroleum geological matters; two of these are a result of seismic and provenance studies carried out by GEUS for the Government of Greenland in preparation for the Disko West 2006 Licensing Round. The third paper presents a combination of landscape and fission track analysis to elucidate the Cenozoic uplift of the West Greenland margin. Five papers are related to various aspects of mineral exploration, focussing on gold (two papers), diamonds (one paper) and general mapping of Proterozoic and Archaean primary geological environments with special emphasis on tectonic and mineralising events (two papers). The last article on Greenland deals with seismic hazard assessment, a discipline carried out at GEUS since the incorporation of the seismological service for Denmark and Greenland in 2004.

GEUS is also involved in a wide range of activities outside its core working areas in Denmark and Greenland that are well illustrated by the four last papers in this review. Three papers are related to national implementation of European legislation, such as the Water Framework Directive. The first paper documents a circum-Baltic project on the development of marine landscape maps, and the two following papers deal with various aspects of groundwater management. One of these is related to the establishment of a groundwater monitoring programme in Latvia, while the other deals with stakeholder participation in adaptive and integrated water resource management in Spain. The last paper on the Cenozoic evolution of the Vietnamese offshore region illustrates how the Survey's broad technical expertise has been put to use in developing countries.