

**EIGHTH INTERNATIONAL COLLOQUY, CENTRE
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This meeting, held at the Centre National de la Recherche Scientifique in Paris on 7–10 November 1983, had as its theme 'The North Pole: history of its conquest and contemporary problems of maritime and air transportation'. Professeur Jean Malaurie, the Director of the Centre d'Etudes Arctiques, was the organiser.

Sessions covered the following topics: the geographical and geophysical background; history of exploration of the Arctic Ocean; early attempts to reach the Pole; modern successes by aircraft, dog team and submarine; there was also a showing of relevant films. Among those presenting papers were several explorers who had reached the Pole, including Pierre Hugon (by air, 1945), Waldo Lyon (submarine, many times), Wally Herbert (dogs, 1969), Guido Monzino (dogs, 1971), and Alfred McLaren (submarine, 1970).

Special reference was made to the Cook-Peary controversy. The recorded voices of both explorers were heard, and a speech in favour of Peary was made by Iggianguaq Uutaaq, a Greenlander from Thule who had accompanied him in 1909. But no conclusion was reached, and Wally Herbert stated emphatically that both men had evidently made remarkable journeys and neither's claim could now be proved or disproved. The Explorers Club of New York issued a formal statement that it was neutral in this controversy, both Cook and Peary having been Presidents of the Club. Other papers dealt with navigational problems in the vicinity of the Pole, economic aspects of shipping in that area, and the application there of the law of the sea. Proceedings of the meeting are expected to be published in due course by the Centre d'Etudes Arctiques.

Reviews

ENERGY RESOURCES OF THE ARCTIC

ARCTIC ENERGY RESOURCES. Proceedings of the Comité Arctique International Conference on Energy Resources, Oslo 22–24 September 1982. Rey, Louis, assisted by C. Behrens. 1983. Amsterdam, Elsevier. (*Cold Regions Science and Technology*, 7) 366 p, illustrated, hard cover. ISBN 0-444-4218-8. US\$78.75 US and Canada, Dfl185 elsewhere.

This valuable and timely book represents the proceedings of a conference on Arctic Energy Resources organised by the Comité Arctique International in association with Det

Norske Veritas, and held in Oslo in September 1982. The proceedings have already appeared once as a volume of the Elsevier journal *Cold Regions Science and Technology*, so the publisher's purpose in bringing out a hardback edition is presumably to provide a more lasting record of the meeting with a long shelf life. They are wise to do this; the book will be used as a standard reference on this subject for some time to come.

It contains 26 chapters, each an expanded version of a lecture given at the meeting. After a few introductory chapters the first main section is on the 'Occurrence of Energy Resources'. The most important chapter here is an outstandingly valuable 80-page contribution on the energy resources of the Soviet Arctic and sub-Arctic by Arthur Meyerhoff. Drawing on a wide variety of Soviet and Eastern source literature (much of it difficult of access), and on his personal experience, Meyerhoff gives a masterly survey of the geological features, coal and oil production and potential in this vast region. There is no other review of this calibre available, and the book is worth buying for this chapter alone. Meyerhoff's contribution is ably supported by useful descriptions of the petroleum potential in Arctic North America and Greenland by Nassichuk; of the coal resources in the Arctic (excluding the USSR) by Alv Orheim; and the status of oil exploration in the Norwegian Arctic by Bersager. These four chapters together provide a complete survey of the oil and coal resources of the circumpolar Arctic, and constitute the most valuable part of the book.

The next section deals with the technical and economic aspects of exploitation, covering such topics as oil exploration methods in ice-covered waters, gas and oil pipelines, and marine transportation (including icebreakers and submarine tankers). The quality of this section is uneven, ranging from valuable reviews such as that by John Hnatiuk on oil exploration methods in the Canadian Arctic, down to the promotional puffs for various oil and gas transportation techniques. These are written in terms of uncritical enthusiasm by their proponents and are known to weary conference-goers as 'Pree-zen-tations'. The inclusion of such pieces in praise of polar gas pipelines, giant LNG icebreaking tankers, and submarine oil tankers is of dubious value in the absence of an editorial over-view, which could have placed the material in a critical context.

The final section deals with environmental and social impacts. Such topics normally produce a vast field of woolly contributions, but here the few chapters are apt and well written. Particularly useful is a review by Howard Hume and others of Arctic marine oil spill research as vigorously carried out in Canada, and there is a brief but interesting history of the Maarmorilik (west Greenland) lead-zinc mine and the way in which technology has reduced the amount of heavy metals in the tailings going into the fjord. There are also thoughtful articles of a more philosophical nature by Geoffrey Larminie of BP, and Dr Finn Sollie.

There is much to criticise in detail in a book of this nature. Of necessity the editorial process has not been perfect, and several errors remain; for instance, some statements about sea ice thickness and properties made in various articles are just plain wrong. The index is also fairly sketchy. The main lack is of an overview for each section, to draw the disparate contributions together and to supply the missing link material. The first section does not need such an overview, but the typical reader would benefit in ploughing through the other sections by having some integration done on his behalf. Nevertheless, this is the most comprehensive and up-to-date book on Arctic energy resources now available, and is certain of a large sale.

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