



Journal of Sedimentary Research

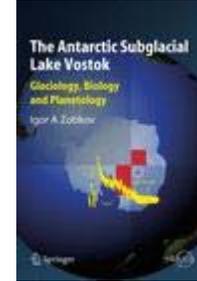
An International Journal of SEPM

Colin P. North and Kitty L. Milliken, Editors

A.J. (Tom) van Loon, Associate Editor for Book Reviews

Review accepted 6 November 2006

The Antarctic Subglacial Lake Vostok—Glaciology, Biology and Planetology Aspects, by Igor A. Zotikov, 2006. Springer-Verlag, Tiergartenstrasse 17, D-69121 Heidelberg, Germany. Hardcover, 200 pages. Price USD 129.00. ISBN 3-540-42649-3.



What seems to be a comprehensive monograph on subglacial Lake Vostok is in the first place a personal account of Dr. Zotikov's research career, starting from his initial steps in space science, leading to his Ph.D., the first mission to Antarctica and the establishment of the Vostok research station, the discovery of subglacial Lake Vostok, and his research with respect to the thermophysics of the Antarctic ice sheet. The latter is probably his most important contribution to Antarctic glaciology, as this theoretical analysis showed for the first time that the base of the Antarctic ice sheet was at pressure melting point in several places, an idea totally inconceivable at that time.

Most of the book chapters treat the pioneering years of Russian (Soviet) Antarctic research and glaciology, from the first theoretical concepts on basal conditions of the East Antarctic ice sheet to the actual discovery of subglacial Lake Vostok by radar sounding and seismics. The following chapters handle the actual drilling at Vostok Station as well as the drilling into the accreted lake ice on top of Lake Vostok. Up to this point, the account is of great historical value, as it is a first-hand account of a researcher from both the Soviet and the post Cold-War period regarding the amazing discovery of the subglacial lake, the development of subglacial lake research and the role of geopolitics herein. However, from here on, the story becomes at once biased and incomplete.

First of all, the following chapters (Vostok Station and the ice shelf; New data on Lake Vostok) primarily focus on Russian research with respect to the lake, while many other international efforts are left out, such as US aero-geophysical investigations, and biological investigations carried out at labs outside Russia. This certainly gives an incomplete view of the research results obtained so far in fields of glaciology and biology, in spite of the subtitle of the book. Secondly, when the author arrives at the section concerning the international study of Lake Vostok and the possible penetration of the lake, he becomes very critical and extremely biased, in an almost Cold-War style of "us against them". This primarily refers to the establishment of SALEGOS (Subglacial Antarctic Lake Exploration: Group of Specialists), which - according to Zotikov - retarded the process of lake access. In addition, the role of SCAR (Scientific Committee on Antarctic Research) and the SALE programme (Subglacial Antarctic Lake Environments) are hardly discussed at all.

Criticism regarding the presentation of the book goes to the figures and pictures, which are of very poor quality, grey scaled and hardly readable.

The Antarctic Subglacial Lake Vostok is not a monograph on subglacial Lake Vostok, as the title suggests, but a historically valuable and personal account of the history of the Soviet and Russian Antarctic research with respect to the subglacial lake and the future activities, i.e. the development of different drilling techniques in order to penetrate subglacial Lake Vostok.

Although the views expressed in the book are somewhat biased and incomplete, the book remains a very valuable historical account as well as good reading.

Frank Pattyn
Laboratoire de Glaciologie
Département des Sciences de la Terre et de l'Environnement
Université Libre de Bruxelles (ULB)
Belgium
E-mail: fpattyn@ulb.ac.be



SEPM - The Society for Sedimentary Geology