

Book Reviews

Proceedings of the Symposium on the Geology of the Canadian Arctic

Edited by J. D. Aitken and D. J. Glass
GAC-CSPG, 368 p., 1974
Members \$12.00,
Non-members \$15.00.

Reviewed by Richard T. Bell
Department of Geological Sciences
Brock University
St. Catharines, Ontario

At first glance it appears that this book should be entitled "Proceedings of the Symposium on the Geology of the Canadian Arctic Archipelago"; 48 per cent is devoted to the archipelago exclusively with a further 24 per cent including parts of the mainland. This suspicion is further supported by the editors' short preface wherein they suggest that the 18 (19 by my count) papers will provide the building blocks on which a future synthesis may be erected, following Thorsteinsson's and Tozer's (1970) "first synthesis of Arctic geology" which in fact was restricted clearly to the archipelago. Nevertheless the editors' choice of papers is generally representative of the scope of interest and of the research in Canadian Arctic geology and should form a worthy volume to accompany and upgrade "Geology and Economic Minerals of Canada" (Douglas 1970).

True to their word there is much hard data which undoubtedly will prove very useful for future syntheses. In particular, F. G. Young's communication on the deposits of the Yukon's north slope, C. R. Barnes' conodont biostratigraphy and the B. I. Chi - L. V. Hills' discussion of

Upper Devonian megaspores in the Imperial Formation are well written and very informative.

R. St. J. Lambert presents a gallant synthesis of the global tectonics of the Arctic Continental shelf with appropriate caution (would that more tectonophysicians were as cautious). J. S. Bell presents important data and interpretation for a late Paleozoic orogeny in the northern Yukon; this is somewhat marred by inversion of Figures 7 and 8 (p. 32 and 33). Balkwill in his paper on the tectonics of the Cornwall Arch proposes a stimulating model for its development. Geldsetzer very concisely summarizes, with excellent figures, the tectono-sedimentary development of the Helikian stratigraphy of northern Baffin Island; this paper is marred by overworking of the terms "cycle" and "megacycle". It fails to demonstrate recurrence adequately.

Kurfust *et al.*, and Judge cover topics on permafrost and geothermal measurements that are of particular importance to the understanding of this terrain and to the development or exploitation of the mineral and petroleum potentials of the Arctic. Finally, Padgham makes a well written, concise review of the mineral potential of the Northwest Territories and parts of the Yukon. Padgham's conclusions (p. 365-366) should be read carefully. Hopefully a next "Canadian Arctic Geology" can devote more effort to hard data in the fields of surficial geology and perhaps Arctic ice studies. Such studies need not lead directly to the discovery of oil traps or ore bodies but rather to the development of the Arctic and better access. It is very encouraging that seven of the papers graciously credit exploration companies for their

direct support in terms of basic field activities. Hopefully more and more companies and their staff will contribute to the exciting prospect of unravelling the geology of this fascinating land.

In summary, the book is not perfect; it is generally well edited; it presents much new data; and it attests to our rapidly increasing knowledge of the Arctic.

MS received, June 17, 1974.