

# Canadian Earth Science in the Eighties: Editorial

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# Canadian Earth Science in the Eighties

## Editorial

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Another step towards a more integrated approach to earth sciences in the public sector in Canada took place May 27 to May 29, 1981 when the federal Department of Energy, Mines and Resources (EMR) invited representatives of the Canadian Geoscience Council (CGC) and of the Canadian surveying community to attend a conference on "Earth Science and Federal Issues".

The conference was called to examine the issues facing EMR and involving the earth sciences. The issues concern the increasing and ever more immediate necessity for a comprehensive and accessible earth science information base in Canada as an essential foundation for the wise and safe use of the country's terrain and natural resources. Virtually all the areas to which earth science is applied - discovery and replenishment of non-renewable resources and groundwater, identification of waste disposal sites, evaluation of terrain for development, especially in the north and offshore, and the recognition and control of geological hazards - require more detailed information on the landmass and a greater understanding of the processes affecting it and the rates at which they occur. These, in turn, demand more sophisticated and expensive approaches and better trained personnel. It is a safe guess that without the requisite information base and the expertise to achieve it Canadian resource development will not reach its potential, costly mistakes will be made and the environmental geological problems we face will grow larger.

The conference, held at Gray Rocks Inn, St. Jovite, Quebec, was attended by more than 30 people, mostly from EMR's Science and Technology Sector, but included A.E. Collin, Associate Deputy Minister, and delegates from the Mineral and Energy Policy Sectors. The conference was chaired by D.J. McLaren, Assistant Deputy Minister (Science and Technology) and J.O. Wheeler, President

of CGC. Universities were represented by W.S. Fyfe, Chairman of the Council of Earth Science Department Heads; provinces by Ian Haugh, Chairman of the Provincial Geologists Subcommittee of the Mines Ministers Conference; the surveying community by D.N. Kendall, member of the National Advisory Committee on Control Surveys and Mapping; and the Canadian Lithosphere Committee by R.W. Macqueen and D.I. Gough, who also represented the universities. The central agencies of the federal government sent representatives from Treasury Board, Ministry of State for Economic Development (MSED) and the Ministry of State for Science and Technology (MOSST).

The conference provided an opportunity for EMR to outline the nature and rationale of the proposed new thrusts or directions of its Earth Science Program, especially for the benefit of the central agencies. It also provided an occasion for the non-EMR people present to question and comment on the EMR proposals and to present examples of thrusts identified outside of EMR. Two of these presentations, as well as a summary of EMR's proposals, appear in this issue.

Perusal of these papers show that different elements of the public earth science community have identified several thrusts in common: need for increased subsurface information from the continents and offshore; greater attention to mineral deposit research; improved sedimentary basin analysis; and better understanding of geological and geochemical hazards, especially those affecting northern and offshore developments. The provincial geological surveys and EMR agree that there is a great need for increased research on mineral deposits and for improved mineral exploration technology. All those present recognized the obvious truth that an innumerable number of activities in Canada, not the least of which is earth science, depend on the availability of accurate, up-to-date topographic maps. In view of the recognition of several thrusts in common between EMR and the remaining public earth science community, those representing CGC felt they could support the EMR proposals in principle.

Much more interaction and discussion is required among all sectors of the earth science community before these thrusts are accepted as parts of an integrated national Earth Science Program.

Obviously we must pool our talents and integrate our efforts for it is plain that the Canadian public earth science section is not large enough to meet the needs of the nation.

Many of the issues that concern the earth science community in Canada, however, are long range and have not yet reached a sufficient level of crisis to become government priorities. Some examples that are matters of increasing concern which may become issues of national priority are: waste disposal, basin fluid depletion and contamination, natural hazards, particularly those related to northern and offshore developments, and concern over the capacity of universities to maintain and train earth science expertise for the future. Other issues relate to opportunities provided by Canada, for example, for the acquisition of subsurface information on continents and offshore and for the study of climatic trends. Accordingly, a concerted effort is needed to brief ministers and central agencies on the importance of these long range issues, the role earth science can play in contributing to solutions, the funding required, and the consequences if the issues and related problems are not addressed. If the earth science community can make its case effectively and demonstrate a reasonably integrated approach, government ministers and central agencies will be much more disposed to provide support for the earth sciences in Canada.

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