

President's Report, 2005

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I. Introduction

Earth sciences play a critical role in the lives of Canadians. Every year, on the order of \$6B is spent on hydrocarbon exploration, \$0.5B on mineral exploration, \$300M on environmental geology, \$150M on geological surveys as part of the spectrum of earth science mapping and monitoring, and \$50M on NSERC-funded research. This adds up to ~1% of the Canadian economy being spent to acquire knowledge that will augment the health, wealth, heritage, and security of Canadians. We all therefore have a role in ensuring that we are a well-organized and well-planned sector, to ensure that these funds are spent as effectively and efficiently as possible, for the maximum benefit toward the quality of life enjoyed by Canadians.

It therefore was an honour, a privilege, and a challenge for me to have been elected President of the Canadian Geoscience Council (CGC) at our 112th meeting held in Calgary on May 30th, 2004, following the highly successful 2nd meeting of the Council of Presidents on the preceding day. Since that time, our principal activity early in the year was organization and co-hosting, with the Geological Survey of Canada (GSC), Geoscience Summit 2004, held in Ottawa in October. As follow-up to the Summit, CGC has launched preparation of a Plan for the Earth Sciences in Canada, with early emphasis very much on renewed arrangements for coordination – the focus of the 3rd meeting of the Council of Presidents on June 18, 2005. In addition, I as CGC President represented the earth science community at the Energy and Mines Ministers conference in Iqaluit in July, 2004, the International Geological Congress in Italy in August, at meetings of the Natural Resources Canada (NRCan) Minister's National Advisory Board on Earth Sciences (MNABES), as well as the GSC Advisory Committee and the Canadian Geological Foundation. CGC also is active in advocacy in support of Canadian earth science through the Partnership Group for Science and Engineering (PAGSE), which speaks for our community on Parliament Hill. We are very active in Canada's international role in earth science, and in promoting earth science outreach through the Canadian Geoscience Education Network (CGEN). CGC activity is, of course, made possible by the commitment of our members, and through the financial support of the Geological Survey of Canada.

II. Geoscience Summit 2004

Over one hundred leaders of the Canadian earth science community met at Geoscience Summit 2004 in October to discuss strategies for maximizing our contribution to society. I acted as Chair of the meeting, along with co-Chair Simon Hanmer, Geological Association of Canada (GAC) Advocacy Coordinator and PAGSE Chair, while sponsors were CGC and GSC. Thirty-nine speakers prepared

analyses, focusing on key points identified in discussions at CGC-sponsored Council of Presidents meetings in November 2003 and May 2004 that concluded that we need to better establish a sense of community, awareness of activity and priorities, and a more unified voice that will allow us to take more effective collective action. Presentations reviewed earth science in the energy, mining, environment, survey, and research sectors. Representatives of associations described the progress of professional registration, and coordination of activities such as conferences and publishing, as well as communications activity such as outreach, advocacy, and student recruitment. Leaders of past, present and potential research programs outlined lessons learned and the opportunities ahead.

The energy and mineral industry representatives focused on the need for renewal of recruitment and training to provide a new generation of geoscientists, while the mining and environment sectors called for increased availability of public geoscience to support their work in fields such as mineral exploration and groundwater protection. The government sector focused on evolving mandates as well as redistribution and adjustment of geological survey and soil mapping capacity, while highlighting important initiatives such as formulation of a national consensus around the Cooperative Geological Mapping Strategies (CGMS) proposal. The International Polar Year (IYP) and the International Year of Planet Earth (IYPE) were reviewed by an invited expert panel, and discussions addressed the implications of the new Canadian Academy of Sciences. Speakers also reviewed the success of LITHOPROBE, and new initiatives were presented, including NEPTUNE, POLARIS, proposals for deep drilling, a major new analysis of polar climate, as well as several other important opportunities. The potential for broader and more aggressive marine programs was discussed, as were planet-scale approaches, our role in health issues such as toxic elements and groundwater protection, reducing our vulnerability to hazards, dealing with climate change, and ensuring sustainable groundwater supply.

The meeting renewed a vision for the critical and extensive role that earth sciences play in our society, thereby emphasizing the importance of good coordination and communication within our community, to ensure that our contribution to society can be optimized efficiently and effectively. Fragmentation of our community voice was seen as our principal challenge, resulting in funding and student recruitment, for example, that fail to fully take into account our needed role. The following priorities therefore were identified:

- A better sense of community; a more effective Canadian earth science union that can better speak for the benefits of earth science; community-wide communication mechanisms; pooling of community resources; coordination of association functions
- More effective outreach and advocacy to enable Canadians to better utilize earth science knowledge, and to optimize the standing of the earth sciences in Canada
- A renewed agenda for surveys and research that will capture the imagination of our community, of the policymakers who fund us, and of the public that the policymakers listen to
- Recruitment of new human resources by providing adequate opportunities for education and work experience; optimize the benefits of professional registration and facilitate professional mobility

III. A Plan for the Earth Sciences in Canada

The Summit revealed opportunities and frustrations. Fragmentation was seen as our principal challenge, and participants were anxious for follow-up steps to be taken quickly. The level of dissatisfaction with our progress, however, implies that a more intricate and effective model for community coordination is needed. The CGC therefore has launched preparation of a Plan for the Earth Sciences in Canada. Plans were made for our June 2005 meetings in Calgary to discuss inputs

required, and for an autumn 2005 meeting in Ottawa to consolidate community views, in preparation for completion of a document in June 2006. Implementation of needed actions will be progressively launched without delay. The participation of the entire Canadian earth science community will be required, as we have a responsibility to ensure that the \$7B that are spent each year on geoscience knowledge acquisition in Canada are spent effectively and efficiently, for the maximum benefit toward the quality of life enjoyed by Canadians.

Our suggested plan for the document consists of fourteen chapters - on Energy, Minerals, Environment, Surveys, Research, Registration, Education, Outreach, Advocacy, International, Conferences, Publications, Foundations, and Coordination. We have already seen key points emerging, at the Summit for example, and no doubt these points will evolve and be considerably revised in coming months. My impression of some of the current key points that might be addressed in the planning exercise include the following:

- **Energy** – at the Summit, it was recognized that we need a better grasp on future human resource needs, so that we can better play a role in ensuring adequate recruitment and training
- **Minerals** – the mining sector also is focusing on human resources, as well as key issues such as professional mobility and the availability of adequate public geoscience information
- **Environment** – the environment sector is implementing lessons learned due to tragedies such as Walkerton & the recent tsunami, and is developing its effectiveness in ensuring, for example, that geological survey agencies play the role that is needed by this sector
- **Surveys** – the functioning of Canada’s geological survey agencies has been vastly improved by the highly successful Intergovernmental Geoscience Accord, and the focus now is on ensuring the successful implementation of critically important initiatives such as the Cooperative Geological Mapping Strategies
- **Research** – in the world of NSERC funded earth science research, exciting new opportunities are being seized, steps are being taken in anticipation of a possible reallocation exercise, and potential new models for organization are being assessed
- **Registration** – the professional registration sector is highly active in intensifying implementation of arrangements regarding topics such as mobility and education
- **Education** - the earth science Chairs are updating statistics on university earth science programs, and are renewing coordination of topics such as recruitment and retention
- **Outreach** – communication designed to enhance medium to long-term outcomes, for the benefit of earth science and for all Canadians, whether through Museums or through volunteer activity, is very active under CGEN leadership
- **Advocacy** – communications designed to influence policy decisions over the short to medium term also are very active, through the highly effective activity of the business groups, and through Parliament Hill mechanisms such as PAGSE
- **International** – the international network is very active, and is lobbying to correct potential actions being considered at UNESCO. Canadians were prominent and active at the International Union of Geological Sciences (IUGS) meetings in Italy last summer, for example, and our engagement is now at a high level
- **Conferences** – there is increasing effectiveness in coordinating and cosponsoring conferences, to ensure that we have the right mix of large and small meetings
- **Publications** – there is a need to influence private sector geoscience publishing to the extent that we can, and to concurrently define, coordinate, and optimize the role of public sector geoscience publishing in the progress of our science

- **Foundations** – we are increasingly wealthy, and willing to donate money to causes that we care about, through donations & bequests to earth science specialty groups, or through donations to all of Canadian earth science through the Canadian Geological Foundation (CGF). This giving is likely to accelerate dramatically in coming years, and optimal mechanisms are needed to receive and disburse these funds
- **Coordination** – defragmentation was again called for at the Summit, and we all have a responsibility to ensure that we have the right spectrum of groups serving business interests, regulation of professional registration, and supporting earth science specialty groups. We also need to ensure that earth science as a whole is appropriately served with needed communications, conferences, and publications, and that we have required mechanisms in place to facilitate needed communication and coordination between the Canadian business, professional, and science sectors

IV. Toward a new coordination model

To ensure our effectiveness, we therefore have organized ourselves. Geoscience knowledge acquisition is primarily directed by businesses guided by sound business practices. Collectively, business activity is also coordinated by highly effective business-based associations. We also are organized as the professional registration sector, based in the provincial/territorial organizations and the Canadian Council of Professional Geoscientists. Our third sector is science, and the most active and effective scientific societies are those that serve earth science specialties. In addition, there are communications, conference, and publications activity that serve the earth science community as a whole – such as Geoscience Canada. Finally, CGC facilitates needed coordination and communication across geoscience business, profession, and science. Our key priority at present is to ensure that CGC or its successor plays an effective role in sustaining a sense of community, and in facilitating collective action so that our contribution to the well-being of Canadians is maximized.

V. Acknowledgements

I would like to acknowledge the support provided during 2004-5 by CGC Past President Doug Stead, by CGC Directors Don James, Alan Morgan, Gerry Reinson, and Bryan Schreiner, by CGC representative to PAGSE Denis St-Onge, and through the high level of commitment and dedication displayed by CGC Executive Officer Bob Mummery. I will look forward to 2005-2006 with confidence and optimism regarding the role that the Canadian earth science community plays in our society.



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