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GAC Presidential Address Annual Meeting, Calgary, Alberta, 30 May 2000

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PRESIDENTIAL ADDRESS

Toward a new era of earth science integration¹ Vers une nouvelle ère d'intégration dans les sciences de la Terre.

GAC Presidential Address
Annual Meeting, Calgary, Alberta
30 May 2000

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SUMMARY

I just turned 40 a few months ago. I believe this makes me the second youngest GAC President. The youngest was from Calgary and is in the audience today. He will recognize himself. When I was asked to return to Council as Vice-President, I thought first of declining the invitation, not because I could not do the job at the helm of the Association. I knew I would not have any problems, knowing well the dedication and hard work provided by the headquarters staff and volunteers on both Council and Executive. What frightened me most was the idea of standing before you here today. What was I to say? What have I to say? I certainly could not speak wisely, like several of my recent predecessors, about the future of earth sciences in Canada, as I know so little about the politics of our profession in this country. Besides, my youth and inexperience preclude any

claim on wisdom. Another reason for fear was the picture of a francophone President from Quebec addressing GAC members and friends in Calgary about a new era of earth science co-operation and integration. This was enough to puzzle the mind! One can't get more dichotomous than this, I supposed.

There is more, however. Two months ago, I became collateral damage of a company struggling within a depressed mineral industry. This has forced me to consider a significant career change. Accordingly, this address also bears for me some other greater, but personal, significance, as it also may be my farewell to a 15-year career that I love very much. So here I am to address you about the future of our science and profession while, for the time being, my future role in our science is far from clear.

First I would like to express my sincere gratitude to the Geological Association of Canada and to those who have allowed me to live among this family during the past 8 years while I served on Council and then on the Executive. This has been a terrific professional and personal experience! It has allowed me to meet and work with many great individuals from various earth science disciplines and from across Canada. It has been a fascinating experience, one which I will always cherish.

The Presidential Address is an outstanding opportunity to address a wide cross-disciplinary audience. This year is even more timely because it is the last GAC Presidential Address of the century, and GAC is meeting here in Calgary with several sister earth science societies, making the audience a more diverse crowd than usual.

So, when it came time to prepare this address I got really scared again. What was I to say? How could I best

capture this unique event as the sun sets on the second millennium? I thought that the time was right to ask Superman to briefly stop the Earth from spinning to give us all a chance to look back at where the GAC comes from. How best to do this? An interesting way is by looking back at what my predecessors had to say on the occasion of their own presidential addresses.

My objective is to learn from the past to better assess what we are and perhaps offer you a vision of how the GAC can best capture the rise of a new millennium within an evolving Canadian earth science community. Over the last 10 years, the GAC Council has gone through several strategic planning exercises to help keep the GAC relevant to its members and to ensure that it continues to assume leadership amongst the greater geoscience community. Recent GAC presidents have reported our progress in their presidential addresses. I want to follow this trail and discuss with you some of our future endeavours.

Looking back at what previous presidents have said in their presidential addresses proved to be an instructive exercise. Despite more than 50 years of history, I discovered, to my astonishment, that, in general, little has changed! Issues are surprisingly similar today. Issues like capacity gaps, professional status for geologists, public awareness of geoscience, growing specialization, segmentation of earth sciences, and the growing scarcity of volunteers, have all been previously raised and discussed more than once. Sceptics would argue that, because these issues or problems still exist, we must do a bad job of addressing them. I don't think so. My perception is otherwise. I believe that the GAC has done its best, but that solutions for these issues far exceeded the capacity of your Association. I believe and will

¹GAC past president photographs that accompany this address show the year in which each address was given. Editor.

attempt to convince you later that unless earth scientists from all allegiances work together collectively, our individual attempts to move the earth science agenda forward will continue to fall short.

I pursued further my exploration of past addresses. Here are some of my findings. Very few presidents chose to speak of their own research or professional interest, other than to paraphrase their science and transpose its concepts to interpret the geoscience community they lived in. A somewhat larger percentage, mostly in the GAC's early years, dealt with the benefits of a strong mineral industry. Given my background, I suppose this is a path I could have taken too, but this is not the most appropriate audience for this approach. You are already converts to the importance of the oil and mineral industries. The vast majority of presidents, however, chose to speak in one form or another on the status of earth sciences and of the role played by the GAC in the geoscience community. This is where I found the most nourishment. Since I feel I cannot speak wisely about this completely on my own, allow me to quote from some of these earlier presidential addresses, since they bear directly on what I will plead for later.

Professional registration for geoscientists is now at the forefront of the earth science agenda in most provinces. The current Chair of the Canadian Council of Professional Geoscientists, Hugh Miller, is a GAC Past President. Listen to what Past President Duncan Derry (1954) had to say here in Calgary,

46 years ago (incidentally the first GAC Annual Meeting to be held in its current May time slot):

In safeguarding and improving the conditions of our profession we do not make it difficult for geologists from other countries to cross our borders and add their experience to ours. Geology knows no political boundaries and geologists ... must be as international as the present state of the world will allow.

Some 18 years later, returning for a second term as President in 1971-1972, Derry (1973) struck a special Professional-Status Committee with representatives from each of the provinces, to monitor the work of groups already active in Ontario and Quebec. Incidentally, despite their very early attempts to secure professional status, these two provinces may end up as the last to register geologists.

Another area of insightful learning contained in previous addresses concerns the role played by the GAC within the Canadian geoscience community. In 1958, 10 years after its inception, W.A. Roliff (1959) commented on the relative representation of Canadian geologists in the GAC. He recognized that the GAC had an image problem and that more efforts should go into identifying "ways and means of encouraging a greater interest in Geology and its application to human endeavours."

A further 10 years later, looking back at the initial reasons that drove the formation of GAC, E.L. Evans (1969) said that the GAC has:

...an opportunity to become the organization to which all qualified geologists could belong...

and

...provided it can become truly representative of all Canadian geologists, its future scopes can far exceed those envisaged by the founding group.

Evans went on to emphasize that "we must improve this position by demonstrating that the future of the GAC is the future of geology in Canada."

This view, perhaps a bit chauvinistic, really set the scene for the forthcoming two presidents and culminated in the formation of the Canadian Geoscience Council.

Hence the importance of forging strategic alliances with other earth science groups has been a long-lasting objective of the GAC.

On speaking in 1969 of the challenges presented by the growing rate of specialization in various earth science disciplines, Yves O. Fortier (1970) concluded:

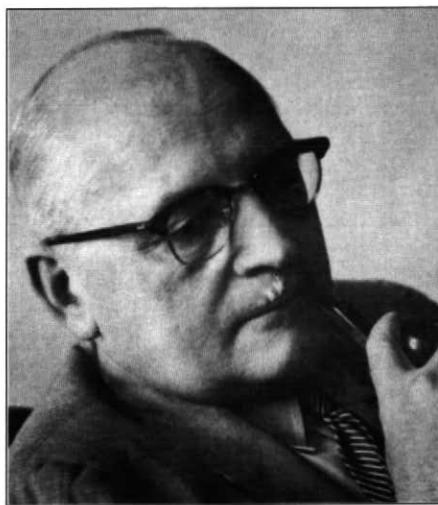
These challenges present opportunities that can be used in isolation of specialities resulting in Pot-Pourri performances; or in awareness of, and in concert with, other specialities and disciplines with the impact of the grand symphony.

He emphasized further that "The GAC has reached the crossroads and by taking the right direction can become the senior geological organization in Canada."

In 1970, Roger Blais (1971), pursued this concept further and pleaded that the GAC had a role to play in the



D.R. Derry, 1954, 1972



W.A. Roliff, 1958



E.L. Evans, 1968

formulation of science policy, particularly in regard to earth sciences. He advocated strongly for the formation of the Canadian Geoscience Council. A year later, in 1972, CGC was formed and Roger Blais became its first Chairman.

GAC's quest for better communication among earth science societies did not die with the formation of CGC. It remains a priority issue to this day. The GAC operates within the Canadian earth science community. It benefits from Fortier's (1970) "grand symphony," and thus must participate in its development for the greater benefit of our society.

In 1972, Duncan Derry (1973) pursued the issue further:

...we are challenged with either restricting ourselves to a narrow study of the Earth or broadening our perspective to ensure adequate communication to and between all Canadian geoscientists.

The importance of better communication with the general public has also been a long lasting issue on the GAC's agenda, although it was only in the 1970s that it really arose as a core subject in presidential addresses.

W.W. Hutchison (1974) placed the GAC at the centre of a triangle whose apices represented the needs of society, geoscience research, and resource-based industry. He went on to illustrate how the GAC can effectively communicate with these end members — its greatest challenge — stating:

There is a wealth of culture and drama in geology. It is a culture shared by few. Whether we be listening to the drama surrounding the unravelling of events

that leads to the evolution of a mountain range or analysing clues in search for a mineral deposit we can be held as fascinated as we can by any other types of cultural performances.

Geology's poor public image was also addressed on several other occasions. Norah Allman (1982) stressed that "geologists have a story to tell and [are] not telling it." She urged all geologists to carry our message:

...to be communicators, to tell Canadians about what we do, about the importance of the things we do in terms of the Canadian economy.

She also noted that poor communication and misleading information can lead to serious misunderstanding.

The stature of our profession and the urgent call to communicate it throughout society was perhaps best delivered in the most poetic address of all. Those of you who were there in Waterloo will remember the gentle but compelling words delivered by Frank Blackwood (1994) on the poetry of geology:

Earth's people need an understanding of the dynamics of the planet, how puny are anthropocentric conceits in the face of them. Earth's people need earth scientists to teach them something of the omnipresence of Earth forces.

As you can see, the words of past presidents may be quite different, but the conveyed message is the same. We must improve our communications with our fellow citizens!

On a somewhat different note, several GAC presidents have strongly advocated for the country's urgent need

for basic geological data. This is certainly not news today. James Thompson (1960) said:

As we enter the Space Age, our attention is increasingly devoted to Sputniks, satellites, space travel and romantic ideas of exploiting the moon and the planets... Are we too, looking for flying objects when maybe we should be looking down, and thinking about the unfinished business beneath our feet?

He went on to pledge that geological mapping needed a rocket booster to allow the unravelling of the geology of Canada.

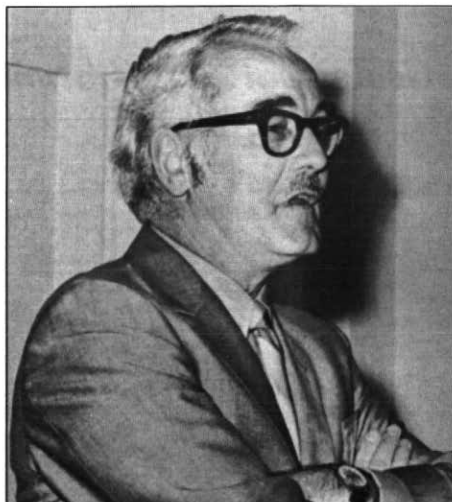
Interestingly, 40 years later a pressing call for increased geological mapping and basic geological data was heard last September at the annual Mines Ministers' conference.

I hope that these samples from the past will provide enough sustaining evidence to convince you of our great challenges in communication and promotion of that which we know best, and of the urgent need for increased collaboration with our sister societies.

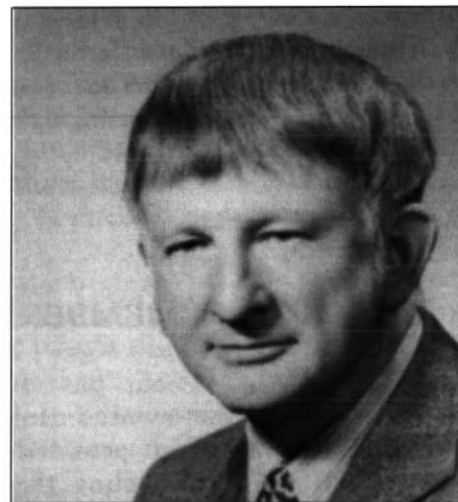
So here we are, and the GAC is turning 53 this spring. Geologists have come and gone and much has changed in our profession. Horizons have broadened considerably but we remain scientists devoted to the study of the Earth, albeit under a more holistic approach in which we now put more emphasis on interrelations and interactions among the concentric shells enclosing the biosphere. How the GAC evolves in this context depends largely on the faith of its members and the dedication of the future volunteers who will stand for duty.



Y.O. Fortier, 1969



R.A. Blais, 1970



W.W. Hutchison, 1974

During the last decade, the GAC has changed a great deal. Perhaps this is not very apparent from an outside perspective, but significant internal changes have occurred in the way it conducts its business. More obvious changes have come about recently. Witness our flagship publications *Geoscience Canada* and *Geolog*. Under new editorship these publications have been completely revamped. Not only do they have a contemporary look and feel, but also their content is rich with timely and sometimes provocative articles. This reflects the sort of change to which we are committed.

For some time, your Executive and Council have been moving toward better long-term planning. The main objective is to keep the GAC relevant to its members while continuing to take a leadership role within the Canadian geoscience community. In 1998, we published an Action Plan, "Towards a New Era of Earth Science Integration" (GAC, 1998). This document laid the foundation for our continued efforts to forge stronger co-operation among earth scientists in Canada. For example:

Our challenge, as Earth scientists, is to look beyond the narrow scope of our specialization and see the opportunities that will grow out of our collaboration... The opportunity exists to achieve more through our collective efforts.

In this context, the GAC will endeavour to forge alliances with other earth science organizations, on all fronts. This is imperative to keep it relevant while continuing to provide sustained and

quality services to its members. The Action Plan envisions:

A geoscience community that is knowledgeable, professionally competent, and respected, whose input and advice is relevant, widely sought and utilized, and whose vital contribution to economic prosperity and social well being is widely acknowledged.

This far-reaching vision will guide our course, but challenges are great and there are numerous perils. Greatest of all is the very short supply of volunteers to drive our mission forward and to help achieve the aspirations of this vision. The GAC is a volunteer-based and -run association. It is currently at risk because of declining commitment and growing segmentation within our profession.

Our Action Plan (GAC, 1998) contains five strategies laying the foundation for a new era of earth science integration. These strategies are:

- Foster new ideas and concepts in the earth sciences,
- Promote lifelong education,
- Promote effective management and use of electronic geoscience information,
- Promote public awareness of science, and
- Shorten the innovation cycle.

During the past year, GAC Council has translated these strategies into a set of concrete and realistic goals that are achievable within what the GAC and its members can afford: look for the details in an upcoming issue of *Geolog*. We will solicit your comments, input, and feedback.

I want to conclude this address by

outlining some of our objectives for the coming year. Besides our member services, the three most important functions of the GAC are: dissemination of scientific information, lifelong learning, and public awareness and advocacy. These functions are expressed through a wide range of activities with which you may be more familiar. For example, our dissemination of scientific information function encompasses this GeoCanada 2000 meeting, the technical program of conferences, and the short courses and field trips attached to it. We also contribute to the dissemination of scientific information through our publications, our website, and the program of activities of all of our sections and divisions.

It is no coincidence that we are meeting here in Calgary with the Canadian Society of Petroleum Geologists, the Canadian Well Logging Society, the Canadian Society of Exploration Geophysicists, the Canadian Geophysical Union, and, of course, our long-time friends, the Mineralogical Association of Canada. This follows a set course established 5 years ago and designed to get societies together to promote much cross-disciplinary dialogue.

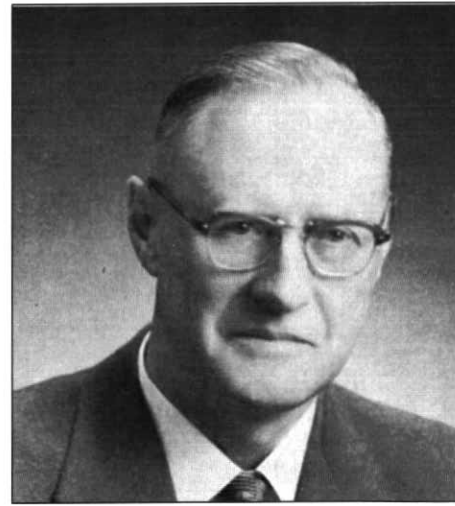
The process of organizing such a meeting faces growing challenges as attendees and parent organizations demand more from the volunteers in the organizing committee. Joint meetings are even more demanding, as individual societies have specific needs with often diverging expectations. Unless we are prepared to provide more assistance to these volunteers, however, meetings like



N.J. Allman, 1982



R.F. Blackwood, 1994



J.E. Thompson, 1960

this one or even the more typical GAC-MAC meetings, are at risk. The GAC annual meeting is one of your Association's key functions. Over the course of the next year the GAC will carry out a complete review of the annual meeting process. Our aim is to set up a permanent, centralized, and web-based coordination office that will handle the logistics of putting together such meetings. This can be a shared function, and I call upon sister societies involved in GeoCanada 2000 to join our efforts in this area.

The publications arena of GAC is undergoing a major renovation. Despite considerable efforts by past and current volunteers to propel the GAC into a modern publication business, our publication process is still a long way from where it should be. The result is certainly apparent to our members: costly publications that take too much time to hit the streets. There has been some success, but our level of achievement is proportional to the volunteer time we put into it. Efficiency requires constant and close attention by our volunteer Publications Committee and Council, perhaps beyond what is now reasonable. Clearly, in a not too distant future, the GAC may no longer be in a position to deliver timely and quality geoscience publications at a reasonable cost, and thus publications will no longer serve our vision. The GAC endeavours to offer quality and affordable earth science to the world. Perhaps the GAC alone lacks the resources to deal with this challenge. I suspect that other societies face a similar challenge, and thus the opportunity exists to achieve more through our collective efforts. Let's be imaginative!

I have a dream. I dream of a professional publication house that would handle all earth science publishing functions for the benefit of geoscience societies in Canada: a Canadian geoscience publishing company run by professionals but managed as a joint venture of earth science societies. Let's all share this dream and work in the short term to establish this joint-venture structure.

A new vehicle for dissemination of scientific information is emerging rapidly with the expanding Internet technologies. The GAC is challenged to occupy the forefront in terms of publication and

information dissemination through this medium. The GAC will seize the opportunity and provide an increasing presence on the Internet by expanding its website to include relevant, current, topical, and accessible scientific information. Anyone should be able to go to our website and find the latest geoscience information or links to it.

Lifelong learning is an area of growing opportunities for the GAC as well as for other earth science societies. A knowledgeable, competent, and respected geoscience community requires that its people develop, maintain, and adapt their professional skills to meet the ever-changing needs of society. The GAC participates in this function with short courses and field trips provided at the annual meeting. Clearly, as geologists attain professional status across Canada, the opportunity exists to provide a diversified curriculum of quality continuing education courses that could be offered anywhere at any time. The GAC has much to offer in the field of national continuing education services. We are present in one form or another in centres across the country, and through our sections and divisions, we cover the full spectrum of earth science disciplines. We will develop a program of short courses and field trips meeting members' professional requirements.

To aspire to become more widely acknowledged for making a vital contribution to the economic prosperity and social well being of the nation, the geoscience community, and the GAC in particular, must increase its communication efforts with societal and political leaders and the general public.

Public awareness is a shared responsibility among all interested in the Earth. Other societies already play an active role in this area. Existing structures such as the Canadian Geoscience Education Network (CGEN), EarthNet, the EdGeo Program, and the Partnership Group for Science and Engineering (PAGSE) are already very active and efficient vehicles. Perhaps the best way for the GAC to reach its vision of a geoscientifically literate public is through such initiatives. The GAC can no longer afford to duplicate existing programs and spread its financial and human resources across the board. Our investment in

public awareness will prove most effective and profitable if we pool our resources. Therefore, the GAC will endeavour to strengthen its support to existing programs and, wherever possible, expand their outreach activities. I call on GAC members to support these programs by volunteering your time. To sister societies, I ask that you enhance your support for these programs. Your help is vital to realize our vision: that is, to improve our image among the public at large, including political leaders.

If we are to effectively advocate the importance of the Earth in the everyday life of Canadians, we need a strong, cohesive voice. The Canadian Geoscience Council has been this voice. The GAC has been a supporter of CGC, but has been critical as well, pointing out that CGC does not serve our community well because it only represents a small percentage of all earth scientists. The current changes fostered by the GAC should help make the CGC more relevant as well as helping to resolve its identity and financial problems. We hope that these changes will lead to permanent dialogue among all those interested in the Earth in Canada. I call for other organizations to join our endeavours to make the CGC truly an effective and respected advocacy body for the Earth.

My term as president ends in a few hours. Over the past 8 years I have witnessed the diversity and great potential of our geoscience community, as well as the dedication and professionalism of GAC members. In closing, I ask you now, individual members of this community, GAC members, and all others, to join our commitment to change and to support our endeavours. The results will ensure a thriving Canadian earth science community well into the next century. Make your move now toward a new era of earth science integration!

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