

INTRODUCTION

A workshop entitled *Canada's Geoscience Knowledge Base: Maintaining Our Competitive Advantage* was held at the 54th Mines and Energy Ministers Conference in St. John's, July 7, 1997. Sponsored by the National Geological Surveys Committee (i.e., CPG and the GSC) and the PDAC, the workshop was designed to draw attention to the importance of Canada's geoscience knowledge base, particularly to the mining industry, to investigate ways of maintaining and enhancing the knowledge base, particularly by government geological surveys, and to raise an awareness of the serious erosion of funding for government surveys over the last ten years, particularly for the benefit of ministers and senior bureaucrats. Workshop participants were drawn from the usual cross-section of stakeholders that attend the Mines Ministers Conference, i.e., mineral-industry organizations, mining companies and senior government officials. The Universities' perspective on and contribution to the knowledge base were also included in the workshop by a CCESD-sponsored presentation and invited faculty participation, mostly from Memorial University. The workshop was chaired by Mary-Claire Ward of the PDAC, and she also gave an excellent summary (also the basis for this report) of workshop results to ministers at their open meeting the next day.

SETTING THE SCENE

To expand on the theme of the workshop and to set the scene for breakout deliberations, six ten-minute presentations were made to participants. The presentations were made by representatives of the PDAC, NRCan, NGSC, CCESD and the BC-YK Chamber of Mines. The main points made can be summarized as follows:

- ◆ Canada is losing its proportionate share of exploration budgets.
- ◆ Reserves of some base metals are in decline in Canada.
- ◆ The geoscience knowledge base is essential to maintaining Canada's advantage. However, government funding for Geological Surveys has been cut by 50 percent over the last ten years (see figure).
- ◆ The knowledge base is a partnership between government, industry and universities.
- ◆ Government provides objective geoscience, e.g., maps and raw data, and maintains and distributes company assessment-work files.

- ◆ Universities train future geoscientists and conduct essential pure research.
- ◆ Industry contributes exploration data to the knowledge base, e.g., drilling, mapping, geochemistry, geophysics.

PRINCIPAL RESULTS

Workshop participants then divided into five breakout sessions to examine specific topics relevant to maintaining and enhancing the geoscience knowledge base. The topics and their main conclusions are presented below:

1. Government Responsibility for the Geoscience Knowledge Base

- ◆ Government has a fiduciary responsibility to provide the basic geoscience knowledge base.
- ◆ The government knowledge base is the objective foundation upon which the more subjective and focused industry work is carried out.
- ◆ The geoscience knowledge base has uses beyond the mineral industry, such as land-use planning, health and safety, hazard prediction and environmental issues.
- ◆ Government's contribution to the knowledge base is essential to maintaining Canada's competitive advantage. The knowledge base must be continuously upgraded.

2. Information Dissemination and Database Gaps and Needs

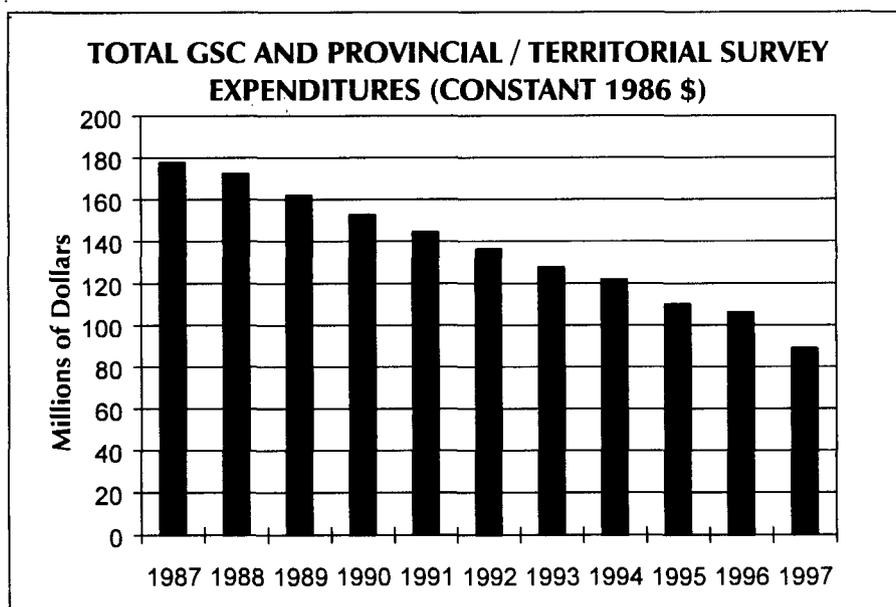
- ◆ Governments should enhance open-file format for rapid release.
- ◆ Continue developing and using digital formats. However, costs for these products should be kept in line.
- ◆ Hard copies of most information products are still required.
- ◆ Factors influencing priorities for new work include: areas not covered, client demand for information, age of data and quality of previous work.

3. University Training: Meeting the Needs

- ◆ Develop fewer centres of specialization.
- ◆ Encourage industrial-research chairs.
- ◆ Ensure curricula include adequate field training (linked to accreditation?).
- ◆ CGC five-year plan: collaborative effort of larger geoscience community.

4. Performance Measures for the Impact of Survey Programs

- ◆ Performance measures should include both industry testimonials and cost-benefit analyses.



- ◆ Today's emphasis is on short-term performance measurement – longer term measurement must also be considered.
 - ◆ The geoscience knowledge base is a critical foundation for the whole mining industry.
5. Alternative Funding Mechanisms for Geological Surveys

- ◆ Retain revenue from existing streams.
- ◆ New dedicated levies on industry.
- ◆ Partnerships.
- ◆ Privatization.
- ◆ Existing Mechanisms.

These workshop-deliberation results were reported to ministers, including a summary of the perceived attractive features of countries competing with Canada for exploration dollars, e.g., elephant country, lower taxes, less regulation, welcoming attitude. Canada's advantages were summarized as follows: better geoscience knowledge base, good services infrastructure and logistical support, good mineral potential, superior health and safety, and political stability. It was concluded that it is still advantageous to explore at home, but not if the erosion in funding to government surveys continues.

RECOMMENDATIONS AND ACTIONS

The workshop also resulted in three recommendations being made to Canada's Mines Ministers:

1. That all levels of government recognize the critical importance of the geoscience knowledge base and commit to ensuring that it is maintained and enhanced.

2. That the continued erosion of government geological surveys be immediately halted, for a period of at least one year.
3. That an industry-led task force be struck to examine funding options for federal and provincial surveys, and to bring recommendations to the 55th Mines Ministers Conference in Calgary in 1998.

The Mines Ministers considered the workshop recommendations during their closed meeting and agreed to the following response:

1. Ministers acknowledge the critical importance of geoscience.
2. It is up to each jurisdiction to separately decide what its budget should be for geological surveys.
3. Ministers agree that a task force be struck to examine funding options. However, this should be an Industry-Government Task Force with government's input being facilitated through the Intergovernmental Working Group (IGWG).

All in all, the workshop was considered a useful exercise by participants, and a success in that it focused on the erosion of funding for all geological surveys in Canada, and collectively made ministers aware of the problem. The commitment by ministers to examine the funding issue through a task force to report at their next meeting keeps this important matter before them for another year. Stakeholders can hope that something positive and concrete will come from the task force's deliberations.

— *Mary-Claire Ward (PDAC) and
Frank Blackwood (NGSC)*