



COOPERATIVE GOVERNMENT GEOSCIENCE IN CANADA

**Presentation to PRAC Workshop on
Cooperative Hydrocarbon Geoscience
in Eastern Canada's Onshore/Offshore**

Moncton, May 29, 2006



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Historical Context



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Government Geoscience Programs – A Long History

- **Geological surveys are some of the oldest government organizations in Canada**
- **Provinces are responsible for their natural resources**
- **GSC established in 1842 by then Province of Canada and continued as federal agency after Confederation in 1867**

Prov / Terr	Survey Founded	1st Systematic Mapping
NF	1864	1930
NS	1865	1950s
NB	1846	1933
QC	1891	1939
ON	1891	1905
MB	1930	1946
SK	1931	1947
AB	1921	1921
BC	1895	1986
YK	1969	1900
NT	1969	1972
NU	1999	1999





Government Geoscience Programs – Impediments to Cooperation

- Competition among jurisdictions can impede collaboration in geoscience
- Different policy and regulatory environments can prevent collaboration
- Provinces and territories vie for federal activity

Prov / Terr	2004 Exploration (millions of \$C)	2004 Production (millions of \$C)
NF	29.4	811.5
NS	9.3	278.3
NB	9.0	760.0
QC	204.4	3,997.7
ON	296.8	7,222.3
MB	31.0	1,232.6
SK	76.7	2,818.2
AB	6.1	1,199.6
BC	128.4	3,589.7
YU	18.2	61.6
NT	109.4	2,156.8
NU	172.0	35.6





Government Geoscience Programs

Up to the 1960s:

- **GSC did much of the framework geoscience, and provinces focused on mining policy and regulation**
- **Small geological surveys in most provinces (ON and QC were exceptions) – often only a few geologists, whose jobs were to monitor and assist exploration**
- **Chief geologists of provinces met annually with GSC – input into federal geoscience programs**





Government Geoscience Programs

- **1970s – 1980s: Well-funded federal-provincial agreements resulted in expansion of provincial surveys and development of mechanisms for joint programs**
- **1990s: Strengthening of coordination and cooperation among the geological surveys negotiated when agreements were terminated**





Present Situation



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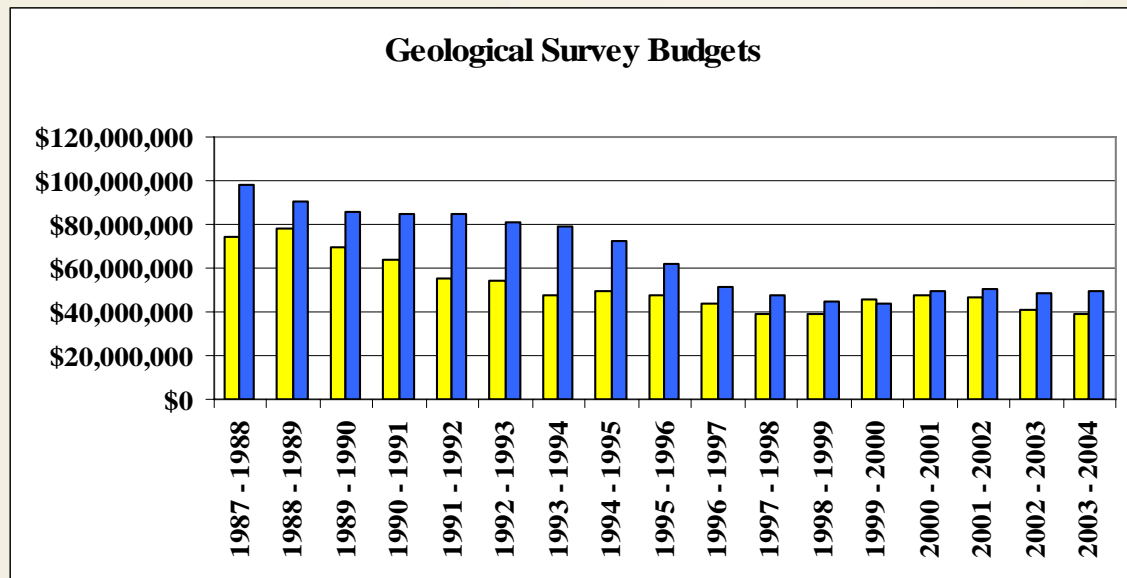
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Government Geoscience Programs

- Geological surveys are operated by 9 of 10 provinces, all 3 territories (2 joint with federal) and the federal government
- Cumulative support for geoscience by the provinces and territories is approximately equal to federal support
- Federal program is more diverse than provinces and territories



Yellow = cumulative provincial-territorial budgets
Blue = Geological Survey of Canada
Constant 1986 \$





The National Geological Surveys Committee

- **Forum for coordination and cooperation among government geological surveys across Canada**
- **Has met annually for over 50 years**
- **Focus has traditionally been on issues related to mineral development – in part, this reflects constrained mandates of many of the provincial surveys**





The National Geological Surveys Committee

Senior officials from:

- **Geological Survey of Canada**
- **Geological surveys of 9 provinces and 3 territories – most are still widely thought to function only or largely in support of the minerals industry**
- **One provincial energy geoscience group (BC)**





NGSC's Accomplishments

- **Collaboration in program delivery**
- **Intergovernmental Geoscience Accord**
- **Canadian Geoscience Knowledge Network**
- **Engaging Mines Ministers**
- **Targeted Geoscience Initiative**
- **Cooperative Geoscience Mapping Strategies**





NGSC's Accomplishments

Collaboration

- **MDAs – Established mechanisms for cooperation and collaborations; programs made major contributions to national database; parallel and joint delivery of projects**
- **NATMAP, EXTECH, MITE – Examples of cooperative programs that often included university and industry partners**
- **Significant component of federal funding in all of these examples**





NGSC's Accomplishments

Intergovernmental Geoscience Accord

- **Developed by NGSC as formal mechanism to maintain cooperation developed by MDAs**
- **First signed by Mines Ministers in 1996; second 5 year term began in 2002; negotiations now underway for renewal in 2007**
- **Defines roles and responsibilities of different levels of government in geoscience**
- **Establishes mechanisms for collaboration**





NGSC's Accomplishments

Canadian Geoscience Knowledge Network

- **To make information holdings of all surveys Internet-accessible and inter-operative**
- **Data catalogue, using CGKN metadata standard, and tool to enable discovery of data completed**
- **Annual technical workshops have been highly successful**
- **Significant policy and technical issues have slowed progress**





NGSC's Accomplishments

Engaging Mines Ministers

- **Two significant reports in 1998 and 1999 on funding for geoscience – spurred by PDAC**
- **Led to annual inclusion of geoscience on agenda for Mines Ministers' conference**
- **Led directly to federal support for TGI**
- **Led directly to development of CGMS**
- **Contributed to decisions by several provinces and territories to increase funding for survey**





NGSC's Accomplishments

Targeted Geoscience Initiative

- **Phase 1 in 2000 - \$5 million annually for 3 years: stimulate mineral exploration**
- **Phase 2 in 2003 - \$5 million annually for 2 years: added energy and north**
- **Phase 3 in 2005 - \$5 million annually for 5 years: assist discovery of base metal reserves in established mining communities**
- **Increases in some provincial budgets**





NGSC's Accomplishments

Cooperative Geoscience Mapping Strategies

- **Significant funding proposal - \$500 million over 10 years – split equally between 2 levels of government**
- **Developed over 4 years as series of annual requests from Ministers to NGSC, resulting from 1998 and 1999 reports**
- **Implementation plan approved in 2004**





NGSC's Accomplishments

Cooperative Geoscience Mapping Strategies

- **Three thrusts to Implementation Plan:**
 - **Secure Energy Supply**
 - **Prosperous Resource-based Communities**
 - **New Economic Development Opportunities**

- **Will address looming shortage of qualified scientists**

- **Will bring national geoscience database to more acceptable level of currency and comprehensiveness**





Improving Cooperation



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NGSC's Strengths

- **Significant cooperation on program delivery**
- **Collegial working relationships**
- **Important for information exchange – common issues, best practices**
- **Invaluable for increasing awareness of geoscience at Ministerial level**





NGSC's Weaknesses

- **Does not fully represent all government geoscience programming**
- **No direct reporting relationship to Ministers**
- **Different policy and regulatory environments of members make national initiatives difficult**
- **Lack of funding arrangement makes national initiatives difficult**





Improving the NGSC

- **Growing applications of geoscience beyond minerals industry – energy, water, natural hazards, environment**
- **Development of energy-related geoscience groups in several provinces and territories – possibility of collaboration**
- **Intergovernmental Geoscience Accord expires in 2007**





Cooperative Government Geoscience in Canada

- **NGSC has been an effective mechanism**

BUT

- **It doesn't represent all government geoscience programs or agencies**
- **It has a limited ability to influence policy and program decisions**
- **There is an opportunity, now, to create a better and more effective voice for public geoscience across Canada**





Challenges to Improving Cooperation

Relevance

Relations

Resources

