



GSC OPEN FILE 946

This item comprises appendices B and D of

GSC Paper 82-6, Part 1, "The Geosciences in Canada, 1982;
Part 1: An examination of the output of the
Geological Survey of Canada; J.A. Coope et al., 1983.

Appendix B: Strategic objectives and long-term plans
of the Geological Survey of Canada

Appendix D: Written comments included in replies
to questionnaire

APPENDIX B

Strategic objectives and long-term plans of the Geological Survey of Canada

Strategic Objectives

CORDILLERAN GEOLOGY SUBACTIVITY

General Objective: To ensure the availability of comprehensive knowledge, technology and expertise on the bedrock geology and mineral resources of the western Cordillera and on the marine geology of the Pacific continental margin.

Cordilleran Regional Geology: to map, describe and explain the bedrock geology of the Cordilleran region and the relationship of geology to mineral deposits.

Specifically:

- to increase, by 1986*, the coverage of modern-standard revision mapping at 1:250 000 to 58% from 50% by completing 8 map-areas; to complete the remainder of primary 1:250 000 geological coverage by the same date, and to conduct associated research;
- to prepare regional and national syntheses, including text and maps for the Cordilleran part of the new edition of Geology and Economic Minerals of Canada, to be published in 1988.

Geothermal Resources and Volcanic Activity: Through geological investigation of volcanic centres in the Cordillera, to assess (i) volcanic and associated hazards and (ii) probable distribution, potential abundance and possible utilization of geothermal resources.

Specifically:

- to complete, with Earth Physics Branch and B.C. Hydro, initial detailed studies of Mount Cayley and Meagher Mountain geothermal sources by 1986; to conduct regional investigations of the Anahim Belt and other volcanic centres in relation to potential geothermal sources and volcanic hazards; and to conduct associated research.

Regional Geology, Pacific Continental Margin: to map, describe and explain the bedrock geology of the Continental Margin and adjacent deep ocean, in conjunction with Earth Physics Branch and Canadian Hydrographic Service, and to provide geological information on potential for occurrence of hydrocarbons.

Specifically:

- by 1986, to complete geological-geophysical reconnaissance of Dixon Entrance, Hecate Strait, and Queen Charlotte Sound, with particular reference to occurrence of hydrocarbons.

*"by 1986" signifies objective to be attained by the end of the next five year planning period.

Coastal and seabed geology: to provide geological maps, reports and other information on coastal and seabed sediments, the processes acting upon them, their response to natural and industrial disturbances, and associated geological constraints and hazards to development.

Specifically:

- to prepare coastal sensitivity maps completing preliminary reconnaissance of the entire coast by 1990;
- to provide maps and reports on seabed sediment distribution (including gravel and sand) completing, by 1986, coverage for parts of the continental shelf and for selected nearshore waters;
- to provide information on geological conditions and hazards that affect seabed and coastal use, particularly with relation to specific developmental projects.

Long Term Plan

5.1 Cordilleran Geology Subactivity

5.1.1 CORDILLERAN REGIONAL GEOLOGY

.1 Modern Standard Bedrock Coverage of the Cordillera, concentrating principally on the following.

A. Selwyn Basin, S.E. Yukon and adjoining areas:

- to complete primary and revision coverage, by 1990, for this area of importance for lead-zinc, tungsten, silver-lead and uranium; to conduct associated research

B. Coast plutonic complex, western B.C.:

- to complete, by 1985, the primary coverage of the Coast Range and revision mapping of selected areas;
- to complete, by 1990, revision coverage of the eastern margin of the complex with particular reference to mineral deposits;
- to conduct associated geological research, particularly biostratigraphic correlation of potentially metalliferous pendents.

C. Bowser Basin and margins, northern B.C.:

- by 1990, to complete primary and selected revision coverage in an area of coal potential and unknown mineral potential; to conduct associated research.

D. Southern Intermontane Belt, southwestern B.C.:

- by 1988, to complete revision coverage, including re-interpretation of critical geological relations, and to conduct associated research (the area contains major copper-molybdenum deposits).

.2 Regional and National Syntheses

- A. To complete the Cordilleran portion of new tectonic and geological maps of Canada for publication in 1988.
- B. To complete the Cordilleran part of the new edition of Geology and Economic Minerals of Canada for publication in 1988.

.3 Geothermal resources and volcanic activity

- A. To complete initial detailed investigation of geothermal sources at Mount Cayley within the 5 year planning period; to conduct similar investigation of the Meagher Mountain sources (in conjunction with B.C. Hydro and Earth Physics Branch).
- B. To identify and conduct initial investigation of other geothermal sources in the Cordillera, including the Anahim belt.
- C. To conduct research on Cenozoic volcanism throughout the Cordillera, providing regional and specific knowledge of volcanic activity and potential geothermal sources.

5.1.2 PACIFIC MARINE GEOLOGY

.1 Bedrock geology of Continental Margin (in cooperation with Earth Physics Branch and Canadian Hydrographic Service)

- A. To complete, within 5 years, reconnaissance geological-geophysical coverage of Dixon Entrance, Queen Charlotte Sound, and Hecate Strait, together with associated investigation of potential for occurrence of petroleum.
- B. To conduct Natural Resource Surveys (gravity magnetics and bathymetric profiling) west of Queen Charlotte Islands and in other offshore areas.
- C. To undertake research relating to geology and tectonic evolution of the Continental margin, including micropaleontological investigations and investigations on-shore, as required.

.2 Seabed and Coastal Geology

A. Coastal Geology:

To prepare, by 1990, preliminary reconnaissance maps and reports showing sensitivity of the Pacific coast of Canada to oil spills, other pollution and physical disturbance, commencing with Strait of Juan de Fuca, Georgia Strait, Hecate Strait, Queen Charlotte Sound, and the west coasts of Vancouver Island and Queen Charlotte Islands; to conduct associated research.

B. Seafloor Sediment Distribution:

To complete reconnaissance sediment distribution maps within the 5-year planning period for offshore areas of the continental shelf including the area adjacent to Vancouver Island, Queen Charlotte Sound and Hecate Strait; to map and explain sediment distribution for selected inshore areas; and to provide inventory information regarding seabed sources of gravel and sand.

C. Geological Conditions Affecting Seabed and Coastal use:

To provide information on geological materials and processes in selected inshore waters, fiords, estuaries and delta areas, and to conduct associated research ----- particularly to identify geological constraints and hazards affecting use of these areas and relating to specific development projects; to include completion of investigations of the Fraser, Cowichan, Nanaimo and Skeena deltas.

Strategic Objectives

SEDIMENTARY AND PETROLEUM GEOLOGY SUBACTIVITY

General Objective: To ensure the availability of comprehensive knowledge, technology and expertise on the geology and resource potential of the sedimentary basins of western and northern mainland Canada, the Arctic Islands, and the Arctic offshore regions. Oil and gas assessment responsibilities are national in scope and will be carried out in cooperation with other components in the Activity.

Sedimentary Regional Geology: to map, describe and explain the bedrock geology of sedimentary basins in western and northern Canada.

Specifically:

- to increase, by 1986*, the 1:250 000 scale coverage for the Arctic Islands and Arctic Mainland to 70% from 50% and to complete by 1990 the 1:250 000 scale coverage for the eastern Cordillera of British Columbia and Alberta; to continuously revise obsolescent coverage;
- to conduct stratigraphic, structural and sedimentological investigations, including 1:50 000 scale mapping in specific areas to explain geological relationships and to assist in exploration for oil, gas, coal and other mineral resources.
- to prepare regional and national syntheses, including text and maps for the Interior Plains and Arctic Islands part of the new edition of Geology and Economic Minerals of Canada to be published in 1988; to prepare 2 maps per year for the National 1:1 million mapping project.

Paleontology: to develop and modify biochronologic standards essential to correlation and comprehension of bedrock geology in the sedimentary basins of western and northern Canada.

Specifically:

- to conduct detailed comparative taxonomic studies of organisms in the fossil record to determine relative time and rates of evolutionary change;
- to provide paleontological interpretations of paleolatitudes, water depths, energy regimes and water chemistries;
- to provide reconstructions of the post-depositional temperature histories of fossiliferous rocks.

*by "1986" signifies objective to be attained by the end of the next five year planning period.

Petroleum Geology: to assess the probable distribution and potential abundance of the oil and gas resources of Canada.

Specifically:

- to provide a series of up-to-date appraisals of conventional oil and gas resources, of heavy oil, tight gas, and other unconventional resources;
- to provide the Secretariat for the Interdepartmental Petroleum Resources Appraisal Panel, and to prepare current intelligence and periodic appraisals for the panel;
- to investigate and report on improved methods of resource evaluation;
- to investigate and report on the geology and occurrence of conventional and unconventional oil and gas for specific areas and formations;
- to undertake geochemical research on petroleum generation, movement, and accumulation to improve the oil and gas appraisals.

Coal Geology: to investigate the geology of coal deposits in western and northern Canada; to determine extent, quality and quantity of selected coal deposits; to develop a National Coal Data File as an integral part of the National Coal Inventory.

Specifically:

- to provide input to the National Coal Inventory, aimed at continual updating of the National Coal File; data on coal resource quality and quantity for the Maritime provinces to be supplied by the Atlantic Geoscience Centre;
- to develop coal data files for provinces having coal resources, including final reports for Saskatchewan and central Alberta by 1986 and file building for British Columbia;
- to investigate and report on the geology and occurrence of coal for specific areas and rock-units;
- to investigate and report on physical and chemical properties of specific Canadian coal relevant to optimal utilization in steel making, thermoelectric power generation and the petrochemical industry.

Sedimentary and Petroleum Geology Subactivity

1. SEDIMENTARY REGIONAL GEOLOGY

.1 Modern Standard Mapping Coverage and Associated Geological Research

A. Within the Arctic Islands:

- to complete by 1985 a strip of 4 map areas (1:250 000) and associated research on Palaeozoic rocks across the northern Sverdrup Basin (northeast Ellesmere Island) - a region with oil and gas potential and copper discoveries;
- to complete by 1986 reports and maps (1:250 000) and associated research on Palaeozoic rocks for 11 map areas in the Franklinian Geosyncline (Devon Island and southwest Ellesmere Island) - the area is geologically comparable to western Alberta with comparable high oil and gas potential;
- to establish by 1987 a detailed stratigraphic framework for surface and subsurface Mesozoic strata in the Sverdrup Basin.

B. Arctic Mainland and Eastern Cordillera:

- to complete by 1983 reports and maps (1:250 000) for 9 map areas in northern Yukon, Franklin Mountains and Mackenzie Mountains and 6 map areas in the eastern Cordillera (Alberta and British Columbia);
- to complete detailed mapping (1:50 000) to complement coal studies in northeastern British Columbia and to complement mineral studies in Selwyn Basin (Yukon);
- to establish by 1986 a stratigraphic framework and depositional model for Tertiary strata in the Beaufort Sea and for Cretaceous and Tertiary strata in the Mackenzie Delta;
- to complete by 1986 stratigraphic interpretation of Cambrian to Devonian strata in the Mackenzie, Wernicke and Richardson Mountains;
- to complete by 1987 regional subsurface stratigraphic studies of Paleozoic and Mesozoic strata between the Arctic Circle and the Arctic Ocean;
- to complete by 1984 Cambrian stratigraphic studies in southern Alberta and British Columbia and, by 1985 Devonian and Mississippian stratigraphic and sedimentologic studies in northeastern British Columbia.

.2 Geological Syntheses

- A. To complete the Arctic Islands and Interior Plains parts of the new edition of Geology and Economic Minerals of Canada, for publication in 1988.
- B. To prepare the Western and Arctic Sedimentary Basins part of the tectonic and geological maps of Canada, for publication in 1988.
- C. To complete 2 maps per year, through 1986 for the National 1:1 million geological compilation series.

2. PALEONTOLOGY

.1 Taxonomy and Biostratigraphy

- to establish a sequence of biochronological zones for Paleozoic strata in the Franklinian Geosyncline and Sverdrup Basin (northeast Arctic Islands);
- to establish biostratigraphic frameworks for marine and nonmarine Mesozoic and Tertiary strata in the Sverdrup Basin and Beaufort Sea--Mackenzie Delta areas;
- to compare evolutionary rates of trilobites, conodonts and brachiopods in the Selwyn Basin, Yukon and eastern Cordillera (B.C. and Alberta) to develop fully refined and integrated biochronologic standards for surface and subsurface correlation.

.2 Depositional and Post-Depositional Environments

- to assess post-depositional temperatures by examining chemical changes within fossil conodonts and plant remains thereby providing insights into depositional load and tectonism;
- to compare paleoenvironments with modern environments by comparing fossil biotic communities with extant biotic communities.

3. PETROLEUM GEOLOGY

.1 Resource Evaluation

- to prepare appraisals of conventional and unconventional oil and gas resources of various regions, completing by 1982 revised oil and gas estimates for the East Coast, Arctic Islands, western Canada, and gas estimates for British Columbia; and by 1984 revised oil and gas estimates for Mackenzie Delta, Arctic Mainland, and West Coast;
- to provide the Secretariat for the Interdepartmental Petroleum Resources Appraisal Panel and consultative service to the Energy Sector;
- to investigate improved methods of resource evaluation.

.2 Geology and Occurrence of Oil and Gas

- to complete by 1982 a preliminary study of the geology of oil shales in Canada, a revised map of oil and gas pools in Western Canada and a study of the petroleum geology, including geochemistry of Arctic Canada;
- to complete by 1984 geochemistry and diagenetic studies of the Viking Formation in Alberta;
- to complete by 1986 reconnaissance studies of source rock potential in the Mackenzie Delta, Beaufort Sea and West Coast regions.

4. COAL GEOLOGY

.1 National Coal Inventory and Provincial Data Files

- to complete by 1982 coal resource evaluations for five areas in Alberta;
- to complete, within five years, computer data files for the Sukunka River (B.C.) and Fording (Alberta) coal fields, and a final report on the data file for central Alberta and Saskatchewan ;
- to complete, within five years, an evaluation of the 1979 assessment of Canada's coal resources and reserves.

.2 Geology of Coal

- to complete, within five years, specific investigations of coal bearing rocks in southern and central Alberta, southeastern British Columbia, Yukon Territory and Arctic Islands.

.3 Coal Technology

- to finalize in 1981 a major report on the petrology of coals of the Kootenay Formation in Alberta and British Columbia;
- to investigate regional rank-variations and coalification in selected coals from Alberta and British Columbia;
- to investigate mineral matter and trace element content of Canadian coals.

Strategic Objectives

PRECAMBRIAN GEOLOGY SUBACTIVITY

General Objective: To ensure the availability of comprehensive knowledge, technology, and expertise on the bedrock geology and mineral resources of the Canadian Precambrian Shield.

1. Precambrian Regional Geology: To map, describe and explain the bedrock geology of the Canadian Shield, and the relationship of geology to mineral deposits.

Specifically:

- by 1986, to raise the primary geological coverage for Canada lands to 25% from 15% by completing 15 1:250,000 map areas, to provide revised coverage for 2 map areas, and to conduct associated research;
- for those parts of the Shield within the provinces, to complement the work of provincial surveys by providing geological maps and other geological information as required to meet national needs;
- to prepare regional and national syntheses of Precambrian geology including, by 1988, text and maps for the Shield part of the new version of "Geology and Economic Minerals of Canada".

2. Precambrian Geochronology: To provide and interpret isotopic age determinations and paleomagnetic determinations, as required for proper understanding of the Precambrian Shield and other aspects of the geology of Canada.

Specifically:

- to prepare 100 age determinations per year, and to interpret their geological and geochronological significance;
- to determine about 20 paleomagnetic pole positions during the next 5 years designed to elucidate geochronological relationships and provide standards for regional and tectonic correlations;
- to install and test new and improved instrumentation for age dating and paleomagnetic measurement within the next 5 years.

Long Term Plan

Precambrian Geology Subactivity

1. PRECAMBRIAN REGIONAL GEOLOGY.1 Primary Geological Coverage for Canada Lands (normally at 1:250,000 scale)

A. Within the NW part of the Shield (Bear-Slave Province):

- to complete by 1986 a strip of map areas across the northern part of the Coronation Geosyncline - a region of recent uranium and base metal discoveries;
- to elucidate the boundary between the Bear-Slave and Churchill Provinces by completing investigations in 3 map areas by 1986.
- to conduct selected revision mapping (2 areas by 1986) and associated research.

B. Within the north central part of the Shield (Churchill Province):

- to complete by 1986 reports and maps for 5 map areas on northern Baffin Island and also for 5 map areas in the Foxe Fold Belt;
- to investigate the region around the Dubawnt Basin, of interest for uranium exploration, completing by 1986 the maps and reports for 4 map areas and the field investigations for 6 map areas;
- to conduct selected revision mapping in 3 areas by 1986 and associated research.

.2 National Priority Investigations in Provinces, complementing work of Provincial Geological Surveys:

- A. To complete by 1986 5 of 6 current mapping tasks (1:250,000 and 1:50,000 scale) in Ontario, Quebec and Newfoundland, and to commence a comparable number of new tasks.
- B. To undertake research on specific geological topics important to the understanding and synthesis of regional geology and its relation to mineral deposits, completing by 1986, 5 of 10 projects currently in progress.

3 Geological Syntheses

- A. To complete by 1988 the Precambrian part of new tectonic and geological maps of Canada;
- B. To complete by 1988 the Precambrian part of the new edition of Geology and Economic Minerals of Canada;
- C. To complete by 1986 3 Precambrian maps for the national 1:1 million geological compilation series.

2. PRECAMBRIAN GEOCHRONOLOGY

.1 Geochronology

- A. To prepare 100 age determinations per year;
- B. To interpret age determinations in terms of local geology and regional and inter-regional frameworks and chronologies;
- C. To develop and improve age dating procedures; to install and test new instruments by 1984.

.2 Paleomagnetism

- A. To prepare about 4 paleopole determinations per year;
- B. To provide regional and tectonic correlations in the Precambrian Shield utilizing paleomagnetism;
- C. To install and test new instruments by 1985 to improve accuracy of measurements.

Strategic Objectives

ATLANTIC GEOSCIENCE SUBACTIVITY

General Objective: To ensure the availability of comprehensive knowledge, technology and expertise on the geology (including resources) of the Atlantic and Arctic offshore regions of Canada and the sedimentary basins of the Appalachian region.

1. **Atlantic Regional Geology:** to map, describe and explain the bedrock and surficial geology of the Atlantic, eastern Arctic offshore areas; to undertake crustal and lithospheric studies in Atlantic and Arctic areas.

Specifically:

- to determine the distribution of bedrock and surficial sedimentary units in the continental margin of eastern and Arctic Canada and the processes controlling their occurrence, concentrating in the next five years on completing initial mapping of Baffin Shelf, Labrador Shelf and Grand Banks, and commencing Hudson Bay and Arctic Island Channels;
- to complete geophysical (gravity, magnetic and seismic reflection) surveys, of the Baffin Island shelf and Labrador shelf and to begin similar work in Hudson Bay, Arctic Island channels and Nares Strait;
- to complete interpretations resulting from international sea-floor crustal and lithospheric studies in the Arctic and western Atlantic oceans; to develop new techniques for these investigations, including large aperture seismic systems, to develop and test quantitative models for the development of continental margins and ocean basins;
- to complete regional syntheses of geological and geophysical data and prepare maps of the Atlantic offshore area for the new version of "Geology and Economic Minerals of Canada".

2. **Environmental Marine Geology:** to provide geological maps, reports and other information on coastal and seabed sediments, the processes acting upon them, their response to natural and industrial disturbances, and associated geological constraints and hazards to development.

Specifically:

- to complete first order reconnaissance of eastern and Arctic Canadian marine coastlines, and to develop techniques for mapping and monitoring coastlines;

- to determine the dominant processes in coastal and marine environments and to develop models of specific geological environments including, in the next five years, studies of the continental slope, fiords, Bay of Fundy;
 - to provide information on geological conditions and hazards that affect seabed use, particularly with relation to specific industrial developments, including, in the next five years, the Beaufort Sea, Hibernia and Sable Island areas, and iceberg scour on the Atlantic continental shelves; investigation of ocean floor sediment characteristics in relation to radioactive waste disposal.
3. Eastern Petroleum Geology: to investigate and interpret the geology of the Atlantic and eastern Arctic offshore regions of Canada and the Appalachian sedimentary basins, with regard to the probable distribution and potential abundance of petroleum, coal and other mineral resources.

Specifically:

- to prepare and update biostratigraphic and lithostratigraphic and geophysical data systems, interpretations, and models for the eastern offshore region;
 - to prepare assessments of petroleum potential for specific areas in the eastern offshore region;
 - to investigate eastern Canadian coal resources and provide advice as required;
4. Marine Geoscience Technology: to develop appropriate instrumentation and methodology to carry out marine geological and geophysical studies on the continental shelf, slope and rise, the coastal zone and the deep ocean basins.

Specifically:

- to develop technology relating to ocean bottom seismometer, sidescan sonar, rock core drill, under ice surveying and sampling equipment and other marine geological sampling and testing equipment;
- to develop data management systems designed to meet the needs of the sub-activity.

J.G. Fyles
July 6, 1981

LONG TERM PLAN

5.4 Atlantic Geoscience Subactivity

5.4.1 ATLANTIC REGIONAL GEOLOGY

.1 Bedrock and Surficial Geology

A. Regional Geological Mapping

- complete surveys of Baffin Island Shelf by 1984 and publish map by 1985.
- resurvey portions of Scotian Shelf, Grand Banks and SE Baffin Island Shelf where previous work indicates possible, geotechnical problems in hydrocarbon development and conduct related research.
- initiate program in Hudson Bay and Arctic Island Channels.

B. Regional Geophysical Mapping

- complete gravity, magnetic and seismic reflection surveys of Davis and Baffin Island Shelf and publish gravity and magnetic maps of Davis Strait;
- complete seismic reflection program in Hudson Bay and initiate Arctic Island Channel program;
- continue associated and experimental surveys.

C. National Syntheses

- complete geological syntheses (reports and maps) of the Canadian east coast offshore for new edition of "Geology and Economic Minerals of Canada".

.2 Deep Structural Investigations

- interpret results obtained from cooperative large aperture seismic experiment (LASE) with Woods Hole, Lamont and University of Texas concerning the nature of the continental margin;
- publish initial cross-section of the eastern Canadian margin from Grenville crust to ocean crust east of Orphan Knoll;
- to conduct research to define deep structure and crustal development of offshore eastern Canada.

5.4.2. ENVIRONMENTAL MARINE GEOLOGY

.1 Coastal Mapping

- complete first order reconnaissance mapping of eastern and Arctic Canadian marine coastlines;
- conduct research into new techniques for mapping coastlines (e.g. remote sensing);
- develop a data system for rapid retrieval of coastal information.

.2 Offshore and Coastal Geological Environments

- complete preliminary determination of dominant processes in coastal environments of Arctic Islands, and conduct research in other selected areas;
- complete development of model of processes and sediment transport in macrotidal environments applicable to Bay of Fundy;
- conduct research into sedimentary processes in fiords, muddy sediments, mass sediment transport, deep ocean currents and dynamic models for modern shelves;
- conduct research into marine geological conditions and processes of the Arctic and ice infested waters such as, offshore permafrost, pingos and diapirs, ice-scour, and ice-sediment interaction;
- determine paleoecologic and biostratigraphic models as required;

.3 Geological conditions affecting seabed use

- within the next five years to complete geological investigations leading to definition of geotechnical and environmental design parameters for petroleum industry activities in the Beaufort Sea, Hibernia area, Sable Island area and commence investigations in other areas of current concern.
- complete re-evaluation of criteria for disposal of nuclear waste in deep sea sediments and conduct related research;
- provide advice on offshore mining, ocean dumping and conduct related research.

5.4.3. EASTERN PETROLEUM GEOLOGY

.1 Lithostratigraphy

- complete report on geology of east Newfoundland basin;
- refine Mesozoic-Cenozoic lithostratigraphy of Scotian Basin, Grand Banks and east Newfoundland Basin using data and samples from offshore wells;
- conduct research on Upper Jurassic-Lower Cretaceous carbonates of the North Atlantic and on other rock units with economic importance;
- develop data base for east coast offshore wells and integrate it with Rangefile;
- determine stratigraphic and structural relationships from geophysical data as required for the foregoing.

.2 Biostratigraphy

- complete study on Late Cretaceous-Cenozoic biostratigraphy, paleoecology, paleo-oceanography and paleo-climatology of North Atlantic;
- complete study on correlation of east coast, North Atlantic deep sea and European biostratigraphy;
- conduct research into foraminiferal biostratigraphy of Labrador Shelf, Paleozoic and Cenozoic palynology;
- conduct routine palynological and micropaleontological analysis of east coast offshore wells.

.3 Resource Evaluation

- complete re-evaluation of Scotian Shelf and assessment of East Newfoundland Basin depending on priorities assigned by Petroleum Resources Appraisal Secretariat;
- investigate petroleum possibilities of various regions and geological units in offshore east coast and Arctic Canada;
- continue well log, geochemical, visual Kerogen and vitrinite reflectance studies to enable prediction of possible oil windows;
- conduct research into coal resources of Maritime provinces and provide advice as required.

5.4.4. MARINE GEOSCIENCE TECHNOLOGY

.1 Instrument Development

- development of ocean bottom seismometer systems including improved recording and acoustic release capabilities;
- development of sidescan sonar including acquisition of new system with increased operating depth;
- development of improved marine geological sampling equipment;
- investigate use of submersibles for geological sampling including under ice surveys.

.2 Data Management

- complete implementation of Geoffrey (data management system for gravity and magnetic data);
- establish basis for linkage of individual data systems (well data, Geoffrey, terrain data base, etc.);
- complete comprehensive documentation of AGC data systems.

J.G. Fyles
July 6, 1981

TERRAIN SCIENCES SUBACTIVITY

General Objective: To ensure the availability of comprehensive knowledge, technology and expertise on the surficial geology, geomorphic processes and natural terrain hazards of the Canadian landmass and on the capability of the terrain to support human activities.

1. Regional Terrain Geology: To map, describe and explain the surficial materials and terrain characteristics of the Canadian landmass.

Specifically:

- by 1986 to increase the standard surficial geological coverage for Canada from 39% to 46% by completing 60 1:250 000 map areas, and to conduct associated research and sample analyses.
- to prepare regional and national compilations and syntheses of the Quaternary geology of Canada including a 1:5M map of surficial deposits of Canada by 1985 as part of the new version of "Geology and Economic Minerals of Canada" and 4 regional maps by 1984.
- to develop a geochronological and paleoenvironmental framework for the Quaternary geology of Canada, including ^{14}C analyses of 200 samples/year and to conduct associated paleobiological and geochronological research.

2. Terrain Use Geology: To describe and explain the physical, chemical and engineering characteristics of geological materials and the natural processes acting upon these materials that influence their stability and/or suitability for the activities of man.

Specifically:

- to provide information on the nature and occurrence of geomorphic processes and on the engineering characteristics of geological materials in Canada; to conduct associated geomorphic and engineering geological research and by 1985 to complete a reconnaissance study of the occurrence of major slope failures in the economically developed parts of southern British Columbia.
- to provide information on the environmental geochemistry of surficial and bedrock materials; to complete by 1984, test surveys in Ontario and Quebec demonstrating the effect of geochemical characteristics of surficial and bedrock materials and water bodies on the impact of acid rain; to conduct associated research and sample analysis.
- to document the distribution of frozen ground and ground ice within permafrost regions of Canada, to conduct associated research on permafrost, and to complete, by 1985, a new version of the 1:5M scale permafrost map of Canada.
- to provide management and co-ordination of S&T Sector involvement with AECL for research on geological disposal of high-level radioactive wastes; to complete by 1985 assessment of the concept of disposal of high-level radioactive wastes in plutonic igneous rocks.

Long Term Plan

Terrain Sciences Subactivity

1. REGIONAL TERRAIN GEOLOGY

.1 Standard Surficial Geological Coverage for Canada

A. North of 60° North Latitude:

- to complete by 1985 surficial geological map coverage at a scale of 1:250 000 for Victoria and Devon Islands and NW Mackenzie north of 68°N. Lat. between 116°-128°W. Long. - areas of interest for transportation of arctic hydrocarbon resources.
- to complete by 1985, in co-operation with DINA and Yukon Territorial Government 8 map areas at a scale of 1:250 000 - areas of interest for mineral development.
- to complete by 1985 or earlier 25 map areas currently in progress in N.W.T., and Yukon - areas of interest for mineral exploration, hydrocarbon transportation and environmental protection.

B. South of 60° North Latitude:

- to complete by 1985 24 map areas in co-operation with provincial government agencies - areas of interest for economic development, environmental protection, and for interpretation of regional Quaternary geological history.

C. Associated Quaternary Geological Research:

- to evaluate by 1985 or earlier applications of Landsat imagery for surficial geological reconnaissance in arctic and boreal regions and to establish surficial geological mapping guidelines for Quaternary regions of Canada.

.2 Compilation and Syntheses

- A. To complete by 1986 or earlier compilations at a scale of 1:500 000 for 3 regions north of 60°N. Lat. and 4 regions south of 60°N. Lat.
- B. To complete by 1984, in co-operation with USGS, compilations at a scale of 1:1M for 2 regions adjacent to the Canada/U.S. border.
- C. To complete by 1985 a 1:5M map of surficial deposits of Canada as part of the new version of "Geology and Economic Minerals of Canada".

.3 Quaternary Geochronology

- A. To conduct paleobiological analyses and research leading to the preparation of 150 internal reports per year and to maintain a production level of approximately 200 ^{14}C analyses per year.
- B. To complete by 1985 paleoenvironmental profiles for 2 regions and a chapter in Quaternary Environments as part of the new revision of "Geology and Economic Minerals of Canada".

2. TERRAIN USE GEOLOGY

.1 Engineering Geology and Geomorphic Processes

- A. To undertake geomorphic and engineering geological research on natural terrain processes and hazards completing by 1985 a reconnaissance study of the occurrence of slope failures in southern British Columbia.
- B. To complete by 1982 fluvial geomorphic investigations of non-gauged rivers in the Mackenzie Valley to establish recurrence intervals and magnitude of floods.
- C. To complete by 1986 a chapter on Quaternary geology in the service of man as part of the new revision of "Geology and Economic Minerals of Canada".

.2 Environmental Geochemistry

- A. To complete by 1984 test surveys in Ontario and Quebec demonstrating geochemical characteristics of surficial and bedrock materials on the impact of acid rain.
- B. To complete by 1986 documentation of 4 case histories of the relationship between components of glacial drift and bedrock mineralization.
- C. To produce an average of 1700 sedimentological analyses per year in support of systematic mapping and terrain use geological studies.
- D. To complete by 1986 a chapter on terrain geochemistry as part of the new revision of "Geology and Economic Minerals of Canada".

.3 Permafrost Research

- A. To complete by 1984 studies of rock heave by frost action in Keewatin - a process of significance for routing of pipelines.
- B. To complete by 1985 a new version of the 1:5M scale permafrost map of Canada.

.4 Radioactive Waste Disposal

- to provide co-ordination and management of GSC, EPB and CANMET involvement with AECL in research on geological disposal of high-level radioactive wastes and by 1985 to complete the assessment of the concept of geological disposal in plutonic igneous rocks.

JSS:lm
10/3/81

Strategic Objectives

ECONOMIC GEOLOGY SUBACTIVITY

General Objective: To ensure the availability of comprehensive geological knowledge, technology and expertise concerning the nature and occurrence of metallic and other mineral deposits, and to determine the probable distribution and potential abundance of Canadian mineral resources to facilitate exploration, land-use planning and formulation of policy.

Mineral Resource Appraisal: In response to specific needs or requests originating in EMR, DINA and elsewhere, to prepare resource appraisals and/or mineral resource intelligence for particular mineral commodities and geographic areas.

Specifically:

- to prepare assessments of mineral resource potential of areas in northern Canada proposed as National Parks, ecological reserves, or under consideration in negotiations of native claims;
- to produce annual (or biennial) confidential estimates of Canadian uranium and thorium resources;
- to meet requests for geological information, advice or resource estimates on mineral commodities or deposit types, including strategic minerals in Canada or elsewhere;
- to develop and improve methodologies for resource appraisal.

Mineral Deposits Knowledge: To develop and update a comprehensive geological knowledge base on the mineral deposits and mineral-bearing environments of Canada, essential for preparation of resource appraisals, for provision of information and advice required by government, and for timely publications on the mineral resources of Canada.

Specifically:

- by 1986, to complete definitive reports on molybdenum, uranium, nickel and iron;

- to prepare syntheses and interpretations of the geology of Canadian mineral deposits, including text and maps for the new edition of Geology and Economic Minerals of Canada (to be published in 1988);
- to provide metallogenic syntheses for mineral regions, particularly the northern Cordillera, northwestern Shield and southwestern Shield;
- to develop and maintain a data bank of computerized and manually accessible files on the geology of Canadian mineral deposits;
- to develop and apply methods for the quantification and statistical analysis of geological data, with main emphasis on mathematical models and statistical techniques applicable to mineral resource determination.

Metallogenic processes: To elucidate the geological factors and processes that lead to formation and localization of Canadian mineral deposits. This understanding is essential for evaluating the potentials of regions to contain mineral deposits and for provision of guides to their discovery.

Specifically:

- to investigate the metallogeny of volcanic-associated massive sulphide deposits with particular reference to fluid-rock interactions in reservoir zones and channelways for parent solutions;
- to investigate sedimentary metallogeny with emphasis on metal-enrichment processes in arid-climate environments and evaporitic differentiation.

Long Term Plan

Economic Geology Subactivity

1. MINERAL RESOURCE APPRAISAL

.1 Regional Appraisals

A. Proposed National Park areas

- to complete in 1981 the Phase I appraisals of Northern Yukon, Ellesmere Island, Bathurst Inlet, Banks Island and, if required Wager Bay, areas.

B. International Biological Programme

- to provide reports on conservation sites as required.

C. Other regions

- to provide in 1981 for Yukon Territory an interim appraisal preparatory to a 1982 report
- to provide reports on other areas as required.

.2 Commodity appraisals

- A. - to provide annual (or biennial) confidential estimates of Canadian uranium and thorium resources
- B. - to provide information, advice or resource estimates on mineral commodities or deposit types, including strategic minerals in Canada or elsewhere, to schedules as required in EMR and for DINA, DREE, DOE, Revenue Canada

.3 Appraisal methodology

- to develop and improve resource appraisal methods that integrate data and concepts from multiple geoscience disciplines with and without application of geomathematical techniques.

2. MINERAL DEPOSITS KNOWLEDGE

.1 Commodity — deposit type metallogeny

- to provide by 1986 definitive reports on iron, molybdenum, nickel and uranium
- to provide reports on the geology of commodities: mineralogy and petrochemistry of nickel in serpentinite (1981), compositional variations in nickel sulphide ores (1981), komatiite-associated nickel deposits (1982), review of magmatic nickel deposits (1983); stratabound sediment-hosted copper deposits (1982, 1983); summary of Canadian chromite occurrences (1982), the chromium potential of synvolcanic komatiitic intrusions (1984); geochemistry of Algoma-type iron formation (1982), basinal sub-types of iron formation (1982);

unconventional sources of manganese (1982); uranium deposits in granitic rocks (1982), uranium deposits of the unconformity type (1983); lead-zinc deposits in carbonate rocks (1982)

- to provide lead isotope studies on mineral deposits in Thompson district, Man. (1981), Bathurst district, N.B. (1981), Thunder Bay district, Ont. (1982), Wollaston Belt, Sask. (1982), Yukon (1982).
- to provide a synopsis of Canadian mineral deposit types: internal characteristics, geological setting, resultant economic characteristics, genetic model and exploration guides (1981 and 1983)
- review of volcanic-associated massive sulphide deposits (1981), covariation of sulphur isotope ratios and metal ratios of volcanic-associated massive sulphide deposits (1982), the distribution of economic metals in volcanic-associated massive sulphide deposits (1982)
- to complete index-level computerization for mineral deposits and occurrences in Yukon and Northwest Territories (1983)
- to document and implement on EMR computer (i) geological image analysis program package and (ii) system of interactive graphic computer programs for multivariate statistical analysis of geological data (1981) and publish the programs (1982)
- to provide reports on mathematical theory and computer programs for ranking and scaling stratigraphic events (1981), statistical modelling of lengths of rock fractures (hazard plots) for studies on disposal of radioactive waste (1981), methods of probabilistic mineral resource evaluation (1982), multivariate statistical analysis of geological and chemical data on carbonate strata with reference to lead and zinc mineralization (1983)

.2 Regional metallogeny

- comparison of metallogenic features of selected types of deposits in the Superior, Slave and Churchill Provinces (1981)
- mineral deposits in Nahanni area, Y.T. - N.W.T. (1982)
- regional metallogeny of Devonian-Mississippian strata in the northern Cordillera with respect to lead-zinc and barite deposits (1983)
- comprehensive synthesis of the Proterozoic metallogeny of the Lake Superior region
- to document and interpret the geology of deposits and mineral environments in the northwestern part of the Canadian Shield with particular reference to comparison with those elsewhere in the Shield (1985)
- metallogeny of the Baker Lake-Thelon region, N.W.T. (1986)

3. METALLOGENIC PROCESSES

- to elucidate relationships between evaporitic sequences and metallic mineral deposits outside them
- to develop quantitative thermodynamically based models of rock-fluid interaction as a step in quantitative modelling of ore-forming processes
- to determine processes and controls on rock alteration in channelways and possible reservoir zones of solutions that generate volcanic-associated massive sulphide deposits

Strategic Objectives

RESOURCE GEOPHYSICS AND GEOCHEMISTRY SUBACTIVITY

General Objective: To provide geophysical and geochemical information on a nationally consistent basis (a) to facilitate the discovery, evaluation and transportation of Canada's mineral (principally metalliferous) resources, and (b) to improve knowledge of the country's subsurface geology:

- by conducting appropriate RD&D relating to existing and new methods of exploration technology, data interpretation and presentation;
- by undertaking the R&D necessary to establish national measurement and reporting standards in exploration geophysics and geochemistry;
- by obtaining and compiling geophysical and geochemical data for systematic national, or regional surveys;
- by integrating all relevant geoscience data to provide comprehensive interpretations.

Regional Geophysics: to apply (primarily) aeromagnetic methods to the general objectives of the subactivity.

Specifically:

- Complete standard aeromagnetic coverage of the land area of Canada and publish maps at appropriate scales as rapidly as funding permits.
- Complete reconnaissance aeromagnetic coverage of the underwater areas to the limits of Canadian sovereignty and publish relevant maps at appropriate scales;
- Initiate aeromagnetic gradiometer mapping of areas selected on the basis of probable resource potential and publish relevant maps;
- Update and maintain aeromagnetic data base and standards for public reference;
- Provide special ad-hoc surveys as required;
- Provide ad hoc interpretation of magnetic data as required;
- Explore opportunities for new aeromagnetic techniques and develop as appropriate.

Resource Geochemistry: to apply geochemical methods to the general objectives of the subactivity.

Specifically:

- Complete regional geochemical surveys of Canada and publish relevant maps at appropriate scales as rapidly as funding permits;
- Update and maintain geochemical data base and standards;
- Provide special ad hoc surveys as required;
- Provide ad hoc interpretations as required.
- Explore opportunities for new and improved geochemical techniques and develop as appropriate, with special emphasis on the problems of recognition of concealed mineralization, and resource appraisal.

Resource Geophysics: to apply (primarily) electrical, radiometric and seismic methods to the general objectives of the subactivity.

Specifically:

- Complete airborne gamma-spectrometer mapping of Canada and publish results at appropriate scales as rapidly as funding permits;
- Update and maintain radiometric standards for public reference;
- Develop and establish standards for electrical and seismic methods
- Initiate selective airborne EM surveys for estimation of overburden thickness and conductivity mapping;
- Provide special ad hoc surveys as required;
- Provide ad hoc interpretations as required;
- Explore opportunities for new and improved geophysical techniques and develop as appropriate, with special emphasis on the problems of subsurface exploration, and detection of permafrost by measuring changes in rock properties at increased distances.

LONG TERM PLANS

RESOURCE GEOPHYSICS AND GEOCHEMISTRY SUBACTIVITY

1. Regional Geophysics

.1 Exploration R & D

- a. To improve the stability of the gradiometer system, develop a more adequate data recording system and replace the flight path recovery frame camera by Video TV system by 1983;
- b. To transfer to the Canadian air survey industry the gradiometer system technology and survey procedure by 1985;
- c. To develop new approaches to the interpretation of aeromagnetic and gradiometer data by 1987.

.2 Special Surveys

- a. To complete the on-going series of experimental surveys with the gradiometer in various geological contexts and for different applications by 1990.
- b. To fly aeromagnetic tie lines across the U.S./Canada border in preparation for the Magnetic Anomaly Map of North America which is scheduled for completion by 1988.

.3 Regional Surveys and Compilations

- a. To complete by 1984 an aeromagnetic survey over parts of NTS sheets 104 F, K, L and M and all of sheets 104 N, O and P in northern B.C.
- b. To complete by 1984 the delineation of sedimentary basins along the northern shore of Ellesmere Island.
- c. To compile a series of 1:1,000,000 aeromagnetic maps and another series of 1:1,000,000 colour contoured regional anomaly maps based on the removal of the IGRF from the latter, at the rate of two 4° x 8° per year.
- d. To compile a magnetic anomaly map of the Arctic at the scale of 1:3,500,000 by the end of 1982.
- e. To produce a revised edition of the Magnetic Anomaly Map of Canada for 1985.
- f. To produce in collaboration with the U.S. and Mexican governments, a magnetic anomaly map of North America. The publication of this map is scheduled for 1988.
- g. To complete the aeromagnetic coverage of Labrador-Newfoundland (134 1:50,000 map sheets) by 1984.

2. RESOURCE GEOPHYSICS

.1 Exploration R & D

- a) Develop technology for continuous monitoring of atmospheric radioactive background by end of 1982.
- b) Develop techniques to utilize the whole of the gamma-ray spectrum in mineral exploration by end of 1982.
- c) Extend theoretical and experimental investigations of nuclear borehole logging techniques from total radioactivity to spectral work by end of 1982.
- d) Investigate problems of nuclear logging in high grade uranium ore zones, and low level nuclear waste by 1985.
- e) Incorporate other parameters (electrical, density, caliper) with nuclear logging facilities in order to improve the assessment of uranium ore grades in D.D.H. and concurrently detect concentrations of other minerals by end of 1985.
- f) Develop and test electrochemical borehole probe by end of 1982.
- g) Construct density and porosity borehole-calibration models at Bells Corners, Alberta and Nova Scotia by end of 1984.

.2 Special Surveys

- a) Experimental surveys to measure radioactivity of snow and its variation during the winter (end of 1983).
- b) Experimental surveys to determine appropriate background corrections for overburden and soil moisture (end of 1983).
- c) Experimental surveys to test effectiveness of COTRAN, TAGA and AFMAG systems in different geological contexts (end of 1982).
- d) Experimental airborne surveys to test the application of gamma-ray spectrometry to exploration for petroleum and gold by end of 1983.
- e) Experimental surveys to test the effectiveness of deep sounding electromagnetic systems in geological mapping and mineral exploration by end of 1984.
- f) High resolution seismic surveys to identify and map permafrost lenses in both onshore and offshore terrains by end 1985.
- g) High sensitivity airborne gamma-ray surveys, when required, to monitor nuclear generator sites or other high radioactivity sources.

.3 Regional Surveys

- a) Reformat all existing Skyvan and contracted gamma-ray spectrometer survey data into a national data base by end of 1982.
- b) Produce series of 1:1,000,000 colour contour radioactivity maps for the 2,000,000 km² of Canada covered by the URP. End of 1982.
- c) Compile Canadian URP data with U.S. NURI data to produce radiometric map of North America scheduled for completion by 1988.
- d) Conduct reconnaissance radiometric surveys with the Skyvan to tie existing URP survey blocks by end of 1985.
- e) Resume Reconnaissance Airborne Radiometric Surveys under contract as part of the National Geochemical coverage of Canada for completion in 1991.

3. RESOURCE GEOCHEMISTRY

.1 Exploration R & D

- a) Determine the distribution of elements in the rocks enclosing selected ore deposits to provide guidelines for lithogeochemical exploration by end of 1985.
- b) Determine the controls on the migration of fluids and gases from different types of ore deposits by end of 1985.
- c) Define the processes of electrochemical oxidation of ore deposits, notably those that may assist in developing exploration methods and in studying the genesis of ore deposits, by end of 1985.
- d) Collect, analyze and certify 41 geochemical standards of stream sediments and 4 standards of lake sediments for distribution to various laboratories throughout Canada and abroad by end of 1982.

.2 Special Surveys

Complete by 1984 a program of geochemical reconnaissance surveys in Ontario -funded by that province - and expected to provide data on the mineral potential of a number of commodities.

.3 Regional Surveys

- a) Complete preparation of publication on geological-geophysical-geochemical data obtained in the Athabasca region, by 1982.
- b) Complete by end of 1985 the interpretation of Regional geophysical-geochemical data for a number of type contexts after having developed computer methods for classifying magnetic, radiometric and geochemical data in relation with geological, remote sensing and other types of data.
- c) Publish a compilation of the trace element data on sulphide minerals by 1982.
- d) Publish a description of the mobility pattern of the trace elements in the stream sediments of the Cordillera by end of 1982.

Strategic Objective
GEOLOGICAL INFORMATION SUBACTIVITY

General Objective: To ensure that the scientific results of the Branch's scientific programs are made available to users through the timely scientific and production editing, text preparation, printing and distribution of reports and maps; that the library of the Geological Survey is maintained at a high level to meet its role as the principal earth science library in Canada and that a Branch public information service is provided.

Specifically:

1. To provide scientific and copy editing service and text preparation for reports and maps prepared for publication by the department.
2. To provide a complete cartographic service including drafting of maps and figures for publication in colour or black and white using standard and computer-assisted methods.
3. To provide specialized photographic services to the scientific staff for preparing technical photographs needed for illustrative purposes and to maintain the Branch collection of scientific and historical photographs.
4. To provide staff and the public with access to a national resource library collection of maps and reports in geology and geophysics.
5. To provide on request specialist consultants on EDP and to advise Branch Management on computer usage.

Geological Information Subactivity

1. SCIENTIFIC EDITING AND PRODUCTION
OF REPORTS, MAPS AND PHOTOGRAPHS.1 Scientific Editing & Publication

- to maintain the quality of the Branch's scientific output by appraisal and editing of reports submitted for publication and to ensure the timely release of information by implementing new methods of text preparation.

.2 Maps

- A. To complete by 1983, 100 preliminary maps (2 colour) displaying surficial geology and terrain features of various parts of Canada.
- B. To continue to produce an average of 300 other multi-colour and monochrome resource maps, charts and illustrations in support of Branch programs and cooperative programs requiring special purpose graphics.
- C. To continue development, concurrently with automated map making of Cartographic Data Reference Systems in order to retrieve essential adjoint map information.
- D. To develop and establish a map negative file system for geological and topographical reference material by NTS number, G.S.C. number and author by 1983.

.3 Photographs

- to maintain services and take advantage of new developments in technical photography.

2. PUBLICATION DISTRIBUTION AND INFORMATION SERVICES

- to maintain the monthly notification system whereby about 4800 addressees are made aware of Branch releases, to distribute more than 250 000 items each year, to meet the public need for information concerning Branch publications by supplying information by mail, telephone and across-the-counter, and to develop more automated indexes to facilitate the dissemination of information.

3. LIBRARY SERVICES

- A. To continue the retrospective conversion of the library's records into the UTLAS data base.
- B. To improve the organization of the map library and implementation of an automated control system.
- C. To enlarge French-language access to the collection, by improving translation services, accession of French language literature in the earth sciences, and provision of information services.
- D. To eliminate backlog in cataloguing non-romanized foreign language publications by eliminating Chinese backlog by 31/08/81 using in-house staff and by eliminating Russian backlog, using contract services, by 31/03/82.
- E. Review holdings in Central Technical Files (CTF) and declassify all non-confidential material in order to make the system more accessible and useful. Complete study into feasibility of indexing CTF documents into GEOSCAN (the EMR sponsored data system).
- F. To expand the use of automated systems in the Library, and to implement new systems for circulation by 1983-84 and for acquisition by 1984-85.
- G. To refurbish the Rare Book Collection, by 1985-86 following an informal evaluation in 1981-82 by the National Library.
- H. To manage the interface between indexing into GEOSCAN and data base managers. GSC will monitor the standard of indexing and in conjunction with federal and provincial organizations will develop policies for the content of the data base.

4. DATA SYSTEMS

- A. To act as specialist consultants on the EDP components of projects throughout the Branch, upon the request of Division and project managers.
- B. To advise Branch management on computer usage and to provide timely and accurate responses to Central Agency requests in this area.

Strategic Objective

CENTRAL LABORATORIES AND TECHNICAL SERVICES SUB ACTIVITY

General Objective: To ensure, through laboratory operation and chemical and mineralogical research, the provision of compositional analyses of rocks, minerals, ores and other geological materials suitable for use in Branch scientific projects, and the provision of mineralogical information to the public.

Specifically:

1. To carry out compositional analyses of a chemical and mineralogical nature on submitted samples in support of Branch scientific projects, of an acceptable quality and within an acceptable time;
2. To undertake research and development in methods and techniques for the compositional analysis of geological materials; and to participate in the preparation and analysis of geological reference materials.
3. To undertake mineralogical research in support of Branch projects, on the composition of Canadian minerals, and of meteorites acquired for the National Meteorite Collection;
4. To maintain and improve the Reference Collection of the National Mineral Collection, the National Meteorite Collection and the GSC Reference Rock Collection. To provide mineralogical information to the public and to prepare for sale sets of rocks and minerals.
5. To provide, in Ottawa, machine-shop and electronic engineering support for instrument development and maintenance, including the design and fabrication of new laboratory and field equipment.

5.9 Central Laboratories and Central Services Subactivity

5.9.1 ANALYTICAL CHEMISTRY

.1 Compositional Analysis

- to provide analyses on about 5 000 - 7 000 submitted geological samples per year.
- to continue the compilation of data on international reference samples of geological materials and the preparation of a set of reference iron-formation rocks.

.2 Method development

- to improve the capability to determine the constituents of geological materials resulting in the routine use of new methods for ferrous iron and volatile elements by 1984.
- to significantly increase the use of the X-ray fluorescence procedures for analysis of non-routine samples, and to acquire a new XRF wavelength dispersive spectrometer by 1986.
- to install a new direct-reading emission spectrograph and significantly improve analytical results by 1985.
- to expand use of the microprocessor-controlled atomic absorption spectrometer for accurate determination of silica and other major constituents.

5.9.2 MINERALOGY

.1 Mineralogical Research

- to conduct mineralogical research in support of branch projects such as uranium in Canadian granites, ore mineralogy studies, and the Radwaste program.
- to investigate the mineralogy and crystallography of several new or rare minerals.

.2 Mineral Identification

- each year, depending on demand, to provide about 2 000 mineral-identifications, 500 clay analyses, 3500 hours of electron microbeam instrument time and 3000 samples for analysis.

.3 Instrumentation

- to continually evaluate operational efficiency of scanning electron microscope, electron microprobe and other instruments and schedule their updating and eventual replacement (new microprobe to be operational in 1985-86).

- to monitor installation of the Ultra Sensitive Analysis Facility (ion microprobe) at University of Toronto, and beginning in 1985 co-ordinate its use in support of branch projects.

.4 Curation and General Interest

- to maintain the National Mineral Collection, the National Meteorite Collection and the Branch reference collection of rocks and ores.
- to continue revision of the guidebook series - "Rocks and Minerals for the Collector."
- to prepare annually about 6000 rock and mineral sets, and 150 collections of Raw Materials of Canada's Mineral Industry.
- to reply to information requests from the public .

5.9.3 TECHNICAL SERVICES

- to provide instrument development, machine shop and electronic engineering support and maintenance services in response to about 150 work orders per year for laboratory and field equipment.

APPENDIX D

Written comments included in replies to questionnaire

PREFACE

In the fall of 1980, the Canadian Geoscience Council conducted a mail questionnaire survey of users of published and unpublished output of the Geological Survey of Canada, with respect to its scientific quality and presentation, relevance to the departmental mission, usefulness to users, timeliness, format and efficiency.

The questionnaire requested the users to provide quantitative indicators to various questions as well as to provide open-ended comments. This book contains only the handwritten comments, arranged in orderly sequence through the use of electronic data processing techniques. An additional report will contain a statistical analysis of the alternate choice responses which constitute the major portion of the questionnaire.

The questionnaires were mailed to the categories of users tabulated below and the comments in this book are classified by the same categories.

Category	Questionnaire Numbers	Number Sent Out	Number Received
Individual Geoscientists	001-501, 505	465	190
University Geoscience Departments	600-645, 647	47	20
Provincial Agencies A (Surveys & Mines Depts.)	650-661	12	10
Provincial Agencies B (Other Geoscience Agencies)	662-672	11	8
Petroleum Companies	700-750, 752-757	57	35
Petroleum Consultants	775-778, 783, 786	14	2
Geotechnical & Utilities Companies & Consultants	800-848, 851-852, 938-944	57	22
Mining and Mineral Explo- ration Consultants	900-937, 945-952	46	27
Mining and Mineral Exploration Companies	1000-1117, 1120-1133	129	81

A copy of the questionnaire designed by the Canadian Geoscience Council with the assistance of the Program Evaluation Branch at EMR, and of Statistics Canada is included for reference.

**ADVISORY COMMITTEE TO
THE GEOLOGICAL SURVEY OF CANADA**

QUESTIONNAIRE

A confidential questionnaire regarding the published and informal output of the Geological Survey of Canada. The reasons for the questionnaire are outlined in the covering letter. This page will be retained by the Advisory Committee.

The questionnaire solicits extended comments as well as summary responses.

If you are responding for an organization, remember you should attempt to represent a consensus or combined view.

SECTION A. RESPONDENT

Name

Discipline(s)

Organization

Type of business

ADVISORY COMMITTEE TO THE GEOLOGICAL SURVEY OF CANADA

SECTION B. WHAT ARE YOUR INTERESTS?

As indicated in the covering letter, we are asking you to respond either on your own behalf or for your organization.

- Yes
- B-1. Do you represent yourself? ☐ 1
Or do you represent your organization? ☐ 2

- B-2. If the latter, approximately how many geoscientists? 3

- B-3. What is your type of business or personal activity?

- | | Oil/Gas | Coal | Metals | Industrial
Materials |
|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Exploration | <input type="checkbox"/> 01 | <input type="checkbox"/> 02 | <input type="checkbox"/> 03 | <input type="checkbox"/> 04 |
| Production | <input type="checkbox"/> 05 | <input type="checkbox"/> 06 | <input type="checkbox"/> 07 | <input type="checkbox"/> 08 |
| Terrain studies | | | <input type="checkbox"/> 09 | |
| Government agency | | | <input type="checkbox"/> 10 | |
| Education | | | <input type="checkbox"/> 11 | |
| Consulting or service agency | | | <input type="checkbox"/> 12 | |

Other (please specify)

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- B-4. Geographic area of interest (check one or more):

- | | |
|-------------------------------|----------------------------|
| Pacific offshore | <input type="checkbox"/> 1 |
| Western Cordillera | <input type="checkbox"/> 2 |
| Western sedimentary basin | <input type="checkbox"/> 3 |
| Western Arctic offshore | <input type="checkbox"/> 4 |
| Arctic islands | <input type="checkbox"/> 5 |
| Precambrian Shield | <input type="checkbox"/> 6 |
| Eastern lowlands | <input type="checkbox"/> 7 |
| Appalachian region | <input type="checkbox"/> 8 |
| Atlantic and eastern offshore | <input type="checkbox"/> 9 |

Comments on Section B

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**SECTION C. WHAT IS THE NATURE OF YOUR USE OF
GEOLOGICAL SURVEY OF CANADA OUTPUT?**

- | | | Yes | No |
|------|---|----------------------------|----------------------------|
| C-1. | Do you receive the Monthly Information Circular of the GSC? | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| C-2. | Do you use GSC published or informal output? | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |

If no, please return questionnaire completed to here.

If yes, do you consider yourself/organization

- | | |
|-------------------|----------------------------|
| a major user | <input type="checkbox"/> 3 |
| an important user | <input type="checkbox"/> 4 |
| a moderate user | <input type="checkbox"/> 5 |
| a minor user | <input type="checkbox"/> 6 |
| a rare user | <input type="checkbox"/> 7 |

- C-3. Which type of documents do you use and how frequently?

Approximate degree of use

	Daily	Weekly	Monthly	Yearly	None
a. Hard copy					
Memoirs	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05
Bulletins	<input type="checkbox"/> 06	<input type="checkbox"/> 07	<input type="checkbox"/> 08	<input type="checkbox"/> 09	<input type="checkbox"/> 10
Papers	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15
Current Research	<input type="checkbox"/> 16	<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20
Economic Geology series	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24	<input type="checkbox"/> 25
b. Maps					
Bedrock	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05
Surficial	<input type="checkbox"/> 06	<input type="checkbox"/> 07	<input type="checkbox"/> 08	<input type="checkbox"/> 09	<input type="checkbox"/> 10
Aeromagnetic	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15
Airborne radiometric	<input type="checkbox"/> 16	<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20
Geochemical	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24	<input type="checkbox"/> 25
Offshore multi-parameter	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30
Regional compilations	<input type="checkbox"/> 31	<input type="checkbox"/> 32	<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35
c. Open File					
Maps and reports	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05
Data tapes	<input type="checkbox"/> 06	<input type="checkbox"/> 07	<input type="checkbox"/> 08	<input type="checkbox"/> 09	<input type="checkbox"/> 10
Microfiche	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15

SECTION C (Continued)

- | | | Yes | No |
|------|--|----------------------------|----------------------------|
| C-6. | Do you, your staff, or company*derive any direct economic benefit from use of any GSC documents? | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| C-7. | Do you, your staff, or company derive any direct economic benefit from use of any GSC informal output? | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| C-8. | Are there any components of present GSC output that you use that could not readily be replaced if not available? | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |

Please comment

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C-9. For components of GSC output that you use but that can be replaced from other sources or other means, what sorts of cost would be involved in replacing them per year?

- | | | | | | | | | | | |
|----|----------------------------|------------------------------------|----|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---|
| a. | <input type="checkbox"/> 1 | Hire more staff. | \$ | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | 2 |
| b. | <input type="checkbox"/> 1 | Spend more on consultant services. | \$ | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | 2 |

Comment

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SECTION D. COVERAGE, RELEVANCE, TIMELINESS, AND ACCURACY

This section attempts to gauge how well your needs are serviced by GSC formal output.

Please rate where applicable to you/your organization only. Comments are desired.

Use scale for columns a to c as follows:

5 = excellently; 4 = well; 3 = acceptably; 2 = marginally; 1 = poorly.

For column d,

5 = >20 years; 4 = 15 to 20 years; 3 = 10 to 15 years; 2 = 5 to 10 years; 1 = 0 to 5 years.

	a How well are your needs served in each topic by GSC formal output (documents)?	b Timeliness of publication of GSC formal output to your needs	c Accuracy, reliability, and scientific quality	d Duration of usefulness of GSC formal output (in 5-year increments)
D-1. FOR REGIONS				
a. Pacific offshore	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
b. Western Cordillera	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
c. Western Canada sedimentary basin (south of 60°)				
i. outcrop studies	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
ii. subsurface studies	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
d. Northwestern sedimentary basin (north of 60°)				
i. outcrop studies	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
ii. subsurface studies	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
e. Western Arctic offshore	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
f. Arctic islands sedimentary basin				
i. outcrop studies	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
ii. subsurface studies	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
g. Precambrian Shield	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
h. St. Lawrence, Hudson Bay, and South Ontario lowlands				
i. outcrop studies	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
ii. subsurface studies	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
i. Appalachian region	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
j. Atlantic and eastern Arctic offshore	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
D-2. FOR DISCIPLINES				
a. Environmental and engineering geology	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
b. Geophysical surveys and technology	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
c. Geochemical surveys and technology	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4
d. Metallogenic studies and types of deposits	<input type="text"/> 1	<input type="text"/> 2	<input type="text"/> 3	<input type="text"/> 4

SECTION E. FORMAT OF PUBLICATIONS

E-1. Is the format of the following publications appropriate for your use?

	Too elaborate	Good	Acceptable	Poor	Not acceptable
a. Hard copy					
Memoirs	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05
Bulletins	<input type="checkbox"/> 06	<input type="checkbox"/> 07	<input type="checkbox"/> 08	<input type="checkbox"/> 09	<input type="checkbox"/> 10
Papers	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15
Current Research	<input type="checkbox"/> 16	<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20
Economic Geology series	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24	<input type="checkbox"/> 25

Comment on any item

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b. Maps					
Bedrock geology					
1:250 000	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05
1:50 000	<input type="checkbox"/> 06	<input type="checkbox"/> 07	<input type="checkbox"/> 08	<input type="checkbox"/> 09	<input type="checkbox"/> 10
compilations					
1:1 000 000	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15
Surficial geology	<input type="checkbox"/> 16	<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20
Aeromagnetic					
1:50 000	<input type="checkbox"/> 21	<input type="checkbox"/> 22	<input type="checkbox"/> 23	<input type="checkbox"/> 24	<input type="checkbox"/> 25
1:250 000	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30
Airborne radiometric	<input type="checkbox"/> 31	<input type="checkbox"/> 32	<input type="checkbox"/> 33	<input type="checkbox"/> 34	<input type="checkbox"/> 35
Geochemistry					
1:250 000	<input type="checkbox"/> 36	<input type="checkbox"/> 37	<input type="checkbox"/> 38	<input type="checkbox"/> 39	<input type="checkbox"/> 40
Offshore multi-parameter	<input type="checkbox"/> 41	<input type="checkbox"/> 42	<input type="checkbox"/> 43	<input type="checkbox"/> 44	<input type="checkbox"/> 45

Comment on any item

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E-2. Do you/your organization have facilities for reading microfiche?

Yes No

☐ 1 ☐ 2

SECTION F. ACCESS

F-1. What are the main sources of GSC documents you use?

	Most important source	Next most important
Public library	<input type="checkbox"/> 01	<input type="checkbox"/> 02
University library	<input type="checkbox"/> 03	<input type="checkbox"/> 04
Government library	<input type="checkbox"/> 05	<input type="checkbox"/> 06
Company library	<input type="checkbox"/> 07	<input type="checkbox"/> 08
Individual library	<input type="checkbox"/> 09	<input type="checkbox"/> 10

Comment.....

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F-2. Do you find access to GSC information adequate? Yes No
☐ 1 ☐ 2

F-3. Which of the following do you use and find effective?

	a Do you use?		b Is it effective?	
	Yes	No	Yes	No
GSC Monthly Information Circular	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 01	<input type="checkbox"/> 02
GSC Yearly Index (Paper 73-3, etc.)	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 03	<input type="checkbox"/> 04
GSC Cumulative Index volumes	<input type="checkbox"/> 05	<input type="checkbox"/> 06	<input type="checkbox"/> 05	<input type="checkbox"/> 06
GEOSCAN	<input type="checkbox"/> 07	<input type="checkbox"/> 08	<input type="checkbox"/> 07	<input type="checkbox"/> 08
GEOREF	<input type="checkbox"/> 09	<input type="checkbox"/> 10	<input type="checkbox"/> 09	<input type="checkbox"/> 10
Information services at GSC offices	<input type="checkbox"/> 11	<input type="checkbox"/> 12	<input type="checkbox"/> 11	<input type="checkbox"/> 12

Comment.....

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F-4. Do you get and use the yearly GSC volume of Abstracts of papers in scientific journals by GSC authors (Paper 78-4, etc.) that give data on GSC output published externally? Yes No
☐ 1 ☐ 2

- Comments**

THE FOLLOWING CRITERIA WERE USED FOR SELECTING QUESTIONNAIRES
TO BE INCLUDED IN THIS REPORT:

INDIVIDUAL GEOSCIENTISTS

FORM NUMBERS: "0001 " THRU "0501 "
 "0505 "

THIS REPORT PRODUCED -

APR 7, 1981

SECTION B: INTERESTS.

SECTION B3

- 0320 RESEARCH INTO ORIGIN OF CLASTIC SEDIMENTARY ROCKS.
- 0332 TYPE OF PERSONAL ACTIVITY: COMPANY IS INVOLVED IN EXPLORATION AND PRODUCTION. I AM CURRENTLY EXCLUSIVELY IN EXPLORATION.

SECTION B4

- 0214 NOT APPLICABLE.
- 0259 COMMENTS: MY MAIN AREA OF INTEREST AT PRESENT IS THE WESTERN CORDILLERA AND TO SOME DEGREE THE WESTERN SEDIMENTARY BASIN. BEFORE TAKING ON THIS ASSIGNMENT I WAS WORKING IN PACIFIC OFFSHORE, ATLANTIC AND EASTERN OFFSHORE, ARCTIC ISLANDS, BEAUFORT SEA, HUDSON BAY, N.W.T.
- 0367 OUTSIDE CANADA
COMMENTS: I KEEP MY EARS AND EYES OPENED FOR OIL, COAL, INDUSTRIAL MINERALS AND GEOTHERMAL ENERGY BUT WOULD PASS ON SUCH PROJECTS TO OTHERS.
- 0403 COMMENTS: IN AND AROUND HELIKIAN SEDIMENTARY BASIN IN NORTHERN SASKATCHEWAN.
- 0405 U.K. AND OFFSHORE ENVIRONS
- 0418 COMMENTS: B-4 GEOGRAPHIC AREAS OF INTEREST INCLUDE: APPALACHIAN REGION - MARITIME PLAIN, ST. LAWRENCE LOWLANDS - WEST AND CENTRAL.
- 0432 THE AGENCY IS INVOLVED PRIMARILY WITH SURFICIAL MAPPING AND STRATIGRAPHY IN THE PLAINS REGION OF ALBERTA. A MINOR AMOUNT OF WORK IS BEING DONE IN THE WESTERN CORDILLERA.
- 0458 COMMENT: INTERESTED IN ANOMALOUS CONCENTRATIONS OF SEVERAL TRACE ELEMENTS AND THEIR SIGNIFICANCE IN RELATION TO THE SEARCH FOR ORE BODIES AND CONTAMINATION AND POLLUTION.
- 0461 DIVERSIFICATION: OIL/GAS; COAL, METALS, INDUSTRIAL, MATERIALS, NON-RESOURCE INDUSTRIES. COMMENTS: GLOBAL, BUT WITH EMPHASIS ON NORTH AMERICA. GEOGRAPHIC AREAS OF INTEREST ARE MORE SPECIFICALLY IDENTIFIED, BUT DEPENDANT

UPON THE PARTICULAR COMMODITY BEING PURSUED.

- 0478 COMMENTS: AS A SOIL BIOCHEMIST MY INTEREST IS NOT NECESSARILY LIMITED TO A SPECIFIC REGION.
- 0480 COMMENTS: EASTERN LOWLANDS-PRESENTLY WORKING IN HUDSON BAY LOWLAND DOING FAIRLY DETAILED FIELD AND REMOTE SENSING STUDIES; ALSO INVOLVED IN A REGIONAL MAPPING PROJECT OF PROVINCE OF ONTARIO (1:500,000, 1:1,100,000).
- 0487 COMMENT: B-3-SURFICIAL AND NEAR-SURFACE (200FT.)
- 0491 B-3 CURATORIAL (MINERALS AND METEORITES)
B-4: GEOGRAPHIC AREA OF INTEREST IS CANADA-WIDE, (AND WORLD-WIDE) ALTHOUGH PARTICULARLY THOSE AREAS OF PRECAMBRIAN.
- 0499 B-4-ENGINEERING GEOLOGY-MAY COVER MORE THAN EASTERN LOWLANDS-MAY INCLUDE APPALACHIAN REGION AND PRECAMBRIAN SHIELD.

SECTION B

- 0065 DEVELOPMENT
- 0091 ALSO SCOTLAND, ALPS, HIMALAYAS
- 0123 PUBLIC UTILITY - ADMINISTRATION AT CONSTRUCTION CONTRACTS ON MAJOR HYDROELECTRIC PROJECTS. GSC DATA USED FOR FOUNDATION OF PROJECTS BEDROCK AND SEISMICITY STUDIES BY GEOLOGISTS AND GEOTECHNICAL STAFF.
- 0129 GEOLOGY, MINERAL RESOURCES AND MINING DEVELOPMENTS IN YUKON
- 0132 INDUSTRIAL RESEARCH FOR THE DEVELOPMENT OF NEW PRODUCTS AND MANUFACTURING PROCESS FOR ABRASIVES, RETRACTORIES HIGH TEMPERATURE MATERIALS, PROPPANTS. OUR RAW MATERIALS DO NOT ORIGINATE IN CANADA.
- 0133 THESE INTERESTS ARE MORE RELATED TO THE AREAS MY COMPANY IS WORKING. PERSONALLY - PRECAMBRIAN SHIELD AREAS INTEREST ME THE MOST.
- 0137 ALTHOUGH OUR STAFF MEMBERS MAKE EXTENSIVE USE OF THE GSC I PERSONALLY IN MY POSITION MAKE LITTLE USE OF THEIR SERVICE. AN INDIVIDUAL STAFF MEMBER HAS RESPONDED TO A SEPARATE QUESTIONNAIRE.

- 0145 ALSO W. AUSTRALIA, SOUTH AFRICA, ZIMBABWE, MINNESOTA, MONTANA, MAINE.
- 0147 TAR SAND MINING, PRODUCES SYNTHETIC CRUDE. MY WORK IS DIFFICULT TO CLASSIFY, SINCE TAR SAND OPERATIONS INVOLVE BOTH OPEN-PIT MINING AND PRODUCTION OF SYNTHETIC CRUDE.
- 0148 JE SUIS PRESENTEMENT ETUDIANT A L'UNIVERSITE DE CHICOUTIMI; JE CROIS DONC QUE CE QUESTIONNAIRE NE S'ADRESSE PAS A MOI, C'EST POURQUOI JE VOUS LE RENVOIE SANS L'AVOIR REMPLI.
- 0165 SEISMIC DATA PROCESSING, GENERALLY WESTERN BASIN, OCCASIONALLY ATLANTIC, ARCTIC OFFSHORE.
- 0173 MORE SPECIFICALLY GRENVILLE GEOLOGY ALSO: JOINTING IN ROCKS AND ASTROBLEMES
- 0190 INTERESTS - FINDING METAL AND OIL RESOURCES. G.S.C. DATA ARE INDISPENSIBLE BASIS FOR EXPLORATION IN CANADA.
- 0194 AS A TEACHER OF REGIONAL GEOLOGY OF NORTH AMERICA I HAVE TO FOLLOW MOST OF THE GSC PUBLICATIONS.
- 0214 PURE RESEARCH (MINERALOGICAL)
- 0215 I HAVE PREVIOUSLY USED WIDER RANGE OF TOPICS AND GEOGRAPHICAL AREAS BUT MY PRESENT POSITION RESULTS IN A MORE LIMITED SELECTION.
- 0223 GRAD STUDENT BUT MAPPED AN AREA FOR GSC THIS YEAR.
- 0224 I HAVE NEVER BEEN EMPLOYED SINCE BEING IN CANADA AND BECOMING A CITIZEN. MONEY FOR RESEARCH GOES ONLY TO FACULTY MEMBERS AND THEIR STUDENTS AND I DO NOT KNOW HOW TO FIND A JOB IN BIOSTRATIGRAPHIC RESEARCH SO THAT I CAN USE MY THREE DEGREES IN GEOLOGY. PLEASE ADVICE. I AM WILLING TO WORK IN ANY OF THESE GEOGRAPHIC AREAS. THERE ARE NO ORGANIZATIONS IN SASKATOON WHICH CARRY OUT RESEARCH OR EMPLOY GEOLOGISTS WITH MY QUALIFICATIONS, OTHER THAN THE UNIVERSITY, WHICH EMPLOYS ONLY THEIR OWN GRADUATES/ SASKATCHEWAN RESEARCH COUNCIL HAS REFERRED ME TO THE UNIVERSITY GEOLOGY DEPARTMENT, FOR THEY "DO NOT CARRY OUT BIOSTRATIGRAPHIC RESEARCH". I ALSO WOULD LIKE TO DO MUSEUM RELATED WORK, BUT WE HAVE NO MUSEUM, (LIKELY A GRADUATE OF THE DEPARTMENT WOULD BE GIVEN THE JOB IF ONE WERE EVER CREATED). I WOULD WELCOME THE OPPORTUNITY TO SERVE ON THE WOMEN'S COMMITTEE OF THE COUNCIL.
- 0225 MY INTERESTS ARE BROAD SINCE MY WORK IS LARGELY ON THEORETICAL ASPECTS OF GLACIAL DEPOSITION AND EROSION. THEREFORE ALL DATA DERIVED IN CANADA OF USE IN MY WORK IS OF VALUE WHATEVER ITS LOCATION OR SOURCE.

- 0258 MY MAIN INTERESTS HAVE BEEN IN THE GENESIS OF MINERAL DEPOSITS, METALLOGENY, AND GEOCHEMICAL PROSPECTING FOR MINERAL COMMODITIES.
- 0287 MAJOR PORTION OF OUR PETROLEUM EXPLORATION DOLLARS EXPENDED IN THE USA BECAUSE OF CANADIAN MARKETING PROBLEMS.
- 0293 MY CURRENT USE OF GSC MATERIAL IS SO RESTRICTED THAT I DO NOT CONSIDER I WOULD BE A GOOD JUDGE OF THE VALUE OF THE MATERIAL THAT IS NOW BEING RELEASED.
- 0298 ONLY ALBERTA BASIN.
- 0301 SIX MONTHS AGO I LEFT A MAJOR CONSULTING FIRM. TO JOIN (AND HELP FORM) THE COMPANY WITH WHICH I AM NOW. WHILST AT THE FIRM I SPENT MANY YEARS STUDYING THE GEOLOGY OF THE ARCTIC ISLANDS AND A LESSER TIME THAT OF THE EAST COAST. THUS I RETAIN MORE THAN A PASSING INTEREST IN THE GEOLOGY OF THESE TWO AREAS BUT TRY TO OBTAIN MY LIVING FROM THE WESTERN CANADIAN SEDIMENTARY BASIN.
- 0305 GOVERNMENT LABORATORY AS I AM NOT A GEOSCIENTIST, THE QUESTION OF GEOGRAPHICAL AREA OF INTEREST IS NOT APPLICABLE.
- 0307 MY INTERESTS ARE IN MINERAL EXPLORATION IN ALL SECTIONS OF CANADA.
- 0319 I HAVE ANSWERED THIS QUESTIONNAIRE REPRESENTING MYSELF ONLY AS THE OPERATIONS OF THE OTHER DIVISIONS OF MY COMPANY (MINERALS, COAL, ETC.) ARE NOT THAT FAMILIAR TO ME. AN OVERALL EVALUATION OF THE TOTAL COMPANY USE OF GSC DOCUMENTS WOULD HAVE TO BE ADDRESSED TO COMPANY MANAGEMENT.
- 0340 EXPLORATION IS GENERALLY RESTRICTED TO THOSE AREAS WITH "REASONABLE" ACCESS AND INFRASTRUCTURE OR WHERE GOVERNMENT HAS BEEN SUPPORTIVE OF NEW MINING FOR ACCESS AND INFRASTRUCTURE.
- 0345 AS CHIEF GEOLOGIST AND "DOMESTIC PATHFINDER" I AM INVOLVED WITH MONITORING PETROLEUM RESOURCE POTENTIAL OF ALL OF CANADA.
- 0346 I THINK ONTARIO GEOLOGISTS WORKING ON THE PALEOZOIC WILL HAVE TROUBLE GETTING THEMSELVES IN THE ABOVE LIST ?? NOT EASTERN LOWLANDS? OR APPALACHIAN. - NO FOREIGN INTEREST ALLOWED IN LIST. NO MI-OCEAN INTERESTS SUCH AS D.S.D.P.
- 0353 THESE ARE AREAS WHERE THIS OFFICE PRESENTLY HAS PROJECTS.
- 0358 CONSTRUCTION - CIVIL ENGINEERING - MINING CONSTRUCTION

OUR ORGANIZATION IS A CONSTRUCTION FIRM - INTERESTED IN DEVELOPMENT WORK OF MINES AND OTHER RESOURCE INDUSTRIES EG PRESENTLY HOLD CONTRACTS FOR WORK IN POWER GENERATION, POTASH MINING, CEMENT PRODUCTION.

- 0378 URANIUM EXPLORATION
- 0407 NOTAMMENT LA PROVINCE GEOLOGIQUE DU GRENVILLE ET EN PARTICULIER LE COMPLEXE ANORTHOSITIQUE DE LA REGION DU SAGUENAY-LAC SAINT-JEAN.
- 0409 ALSO STUDENT
- 0415 FOREST INDUSTRY
- 0424 PROVINCIAL MUSEUM - THEREFORE A COMBINATION OF CURATION, EDUCATION, AND RESEARCH. AS AN EMPLOYEE OF A PROVINCIAL INSTITUTION MY PRIMARY ACTIVITIES MUST FIRST BE DIRECTED TOWARDS AREAS (BOTH GEOGRAPHIC AND PHILOSOPHIC) WITHIN THE PROVINCE.
- 0433 COMMENT: THE MAJORITY OF MY WORK HAS CONCENTRATED WITHIN THE AREA OF THE EASTERN ATHABASCA BASIN (URANIUM) AND THE SOUTHERN INTERIOR OF BRITISH COLUMBIA (URANIUM AND PORPHYRY COPPER) - MINOR BASE METALS EXPLORATION WITHIN THE SHIELD AREAS OF BOTH NORTHERN AND SOUTHERN ONTARIO IS ALSO OF INTEREST.
- 0452 MY WORK CAN INVOLVE ME IN ANY OF THE GEOGRAPHIC AREAS LISTED. THE ONES I'VE TICKED REPRESENT AREAS WHERE I HAVE BEEN INVOLVED. THE WORK HAS RANGED FROM HEAVY OIL IN, THE WEST, RADON AND METHANE WORK IN ONTARIO AND SASKATCHEWAN AND RADIOACTIVE WASTE MANAGEMENT SITING IN NEW BRUNSWICK.
- 0479 RESEARCH COMMENTS: LAND RESOURCES OF ABOVE AREAS FOR AGRICULTURE PRODUCTION.
- 0481 INTERESTS LIE MAINLY IN ENVIRONMENT IMPACTS RELATING TO ONSHORE DEVELOPMENT - MINES, AGRICULTURE, TIDAL POWER PROJECT ETC.
- 0486 B-3 LAND RECLAMATION, IMPACT ASSESSMENT. COMMENTS: B-3 RECLAMATION OF MINED OIL SAND LAND
- 0489 GOVERNMENT AGENCY PROVIDING CONSULTING SERVICES FOR MUNICIPALITIES ETC. COMMENTS: WORK CONFINED TO B.C.

SECTION C: NATURE OF USE OF GSC OUTPUT.

SECTION C1

- 0220 (DIDN'T KNOW IT EXISTED). WOULD LIKE TO RECEIVE IT.
- 0224 I WOULD LIKE TO.

SECTION C2

- 0347 RECREATIONAL HOBBY USER
- 0478 MY PERSONAL USE HAS BEEN SO MINIMAL THAT I MUST ANSWER NO. I SOMETIMES USE GEOLOGICAL MATERIAL THAT OTHERS HAVE EXTRACTED FROM VARIOUS SOURCES INCLUDING GSC.
- 0492 TO WHOM IT MAY CONCERN: WE WOULD BE DELIGHTED TO SECURE PUBLICATIONS RELATIVE TO SURFICIAL GEOLOGY, SUBSURFACE GEOLOGY, SEDIMENTOLOGY, LANDFORMS, GLACIAL AND RECENT SEDIMENTS, SUBSURFACE HYDROLOGY, ETC. FOR THE WESTERN SEDIMENTARY BASIN OR THE WESTERN AND NORTHERN PORTION OF THE INTERIOR PLAINS.

SECTION C3

- 0087 (B) TOPOGRAPHIC?
COMMENTS: C SERIES QUESTIONS ARE AMBIGUOUS. ANYONE WHO PRACTICES ANY BRANCH OF GEOLOGY AUTOMATICALLY USES THE QUADRANGLE MAPS AND REPORTS AS A STARTING POINT. THE QUESTIONS DON'T PERMIT EMPHASIS TO BE MADE ON THE VALUE OF QUADRANGLE MAPPING. A MEMOIR CAN BE A QUAD OR A TREATISE ON VALUES. CLEARLY THE QUAD STUDY IS A MORE WIDELY USED AND VALUABLE REFERENCE. THE PANEL SHOULD HAVE HAD A FIELD GEOLOGIST ON ITS STAFF.
- 0346 (A) PAPERS - I.E. MORE OFTEN THAN ONCE A YEAR.
(B) MARINE SCIENCE PAPERS WITH C.H.S - NATURAL RESOURCE MAPS - CHS
- 0371 MEMOIRS

SECTION C4

- 0346 (A-B) WITH RESPECT TO MARINE ENVIRONMENT - SOURCE OF INFORMATION.
- 0422 (A) I USE THE HARD COPY, WHERE LISTED AS BASIC REFERENCE, FOR ALL OTHER TYPES OF USE.
(B) I USE SURFICIAL, GEOCHEMICAL; GEOPHYSICAL MAPS FOR INTEREST OR TO SEE HOW THESE FEATURES RELATE TO GEOLOGY OF AN AREA.

SECTIONS C2 TO C4

- 0367 IMPORTANT TO ME.

SECTION C5

- 0040 (A AND B) HAVE ASSUMED "OTHER OUTPUT" MEANS PUBLICATIONS ETC., FROM AGENCIES OTHER THAN THE GSC.
- 0204 NATIONAL MINERAL INVENTORY USED AS REFERENCE AND SOURCE OF IDEAS QUITE FREQUENTLY.
- 0233 (A) OTHER OUTPUT YES, BUT NOT GSC.
(B) OTHER NON GSC? IF SO THEN EXTERNAL PUBLICATIONS.
- 0257 COMMENTS: C-3 A/B/C - USE IS MORE QUARTERLY THAN MONTHLY OR YEARLY. C-4 AND C-5 - COMMENT AS ABOVE.
- 0415 COMMENT: INFORMATION FROM G.S.C. IS USED AS BACKGROUND FOR INCORPORATION INTO TERRAIN ASSESSMENTS OF A GIVEN AREA PRIOR TO LOGGING.
- 0432 BEDROCK AND SURFICIAL MAPS ARE THE MOST COMMONLY USED G.S.C. DOCUMENTS. MEMOIRS AND BULLETINS ARE USED MORE AS REFERENCE MATERIAL.
- 0433 - MEMOIRS USEFUL IN PROVIDING AN INTRODUCTION TO AN AREA WHICH MAY OTHERWISE BE COMPLETELY UNFAMILIAR TO ME - QUICK, CONCISE SYNTHESIS WITH REFERENCES FOR FURTHER INFORMATION - SAME WITH THE MAPS.
- RESEARCH PAPERS USEFUL ONLY IF CONFINED TO A SPECIFIC GEOGRAPHIC AREA OR TO A COMMODITY OF INTEREST.
- 0437 IN ASSIGNED PROJECTS STUDENTS MAKE SOME USE OF FOREMENTIONED PUBLICATIONS; UNFORTUNATELY OUR LIBRARY

HAS NOT BEEN EVER CONSIDERED FOR AUTOMATIC RECEIPT OF ALL THESE IN SPITE OF THE FACT THAT WE ARE BECOMING A MAJOR POST SECONDARY GEOLOGY DEPARTMENT GRADUATING 30 PLUS STUDENTS A YEAR IN GEOLOGY.

- 0438 I HAVE SEVERAL LINES OF ACTIVE COMMUNICATION WITH OFFICERS OF THE G.S.C. WHO ARE PRODUCING VERY USEFUL BASIC DATA, PARTICULARLY MAPPERS AND PALEONTOLOGISTS. INFORMAL EXCHANGE OF INFORMATION HAS PROVED TO BE MUTUALLY BENEFICIAL. THE G.S.C. PROVIDES BASIC PUBLISHED DATA THAT ARE ESSENTIAL TO MY WORK.
- 0457 C-5: I HAVE CLOSE CONTACT WITH MEMBERS OF THE CORDILLERAN OFFICE IN VANCOUVER.
- 0458 COMMENT: FREQUENTLY CONSULT "HARD COPY" AND MAPS FOR INFORMATION ABOUT MINERAL OCCURRENCES. FROM TIME TO TIME CONSULT WITH MEMBERS OF THE G.S.C. ASKING FOR INFORMATION AND ADVICE ABOUT MATTERS GEOLOGICAL AND GEOGRAPHICAL.
- 0470 AIR PHOTOS.

SECTIONS C1 TO C5

- 0012 MOST OF THE USE IS FOR PERSONAL BENEFIT.
- 0040 FREQUENCY OF USE OF THOSE ITEMS CHECKED YEARLY IS INTENDED TO INDICATE SEVERAL TIMES PER YEAR BUT NOT AS FREQUENTLY AS MONTHLY.
- 0083 MY USE OF GSC OUTPUT HAS BEEN VERY LIMITED, PROBABLY THE RESULT OF A LACK OF KNOWLEDGE OF THE PUBLICATIONS THAT COULD BE HELPFUL. TO COMPLETE THIS QUESTIONNAIRE FURTHER WOULD SERVE NO USEFUL PURPOSE TO THE ADVISORY COMMITTEE.
- 0091 SHORTAGE OF MAPS A MAJOR DRAWBACK.
- 0129 OUR OFFICE HAS A COMPLETE LIBRARY OF GSC PUBLICATIONS AVAILABLE TO PUBLIC - MANY OF MY CONSULTATIONS OF DOCUMENTS ARE TO FIND INFORMATION FOR VISITORS TO OUR OFFICE. WE ALSO HAVE A SALES OUTLET FOR GSC MAPS AND REPORTS . WE USE GSC GEOLOGICAL MAPS AND MINERAL KITS IN OUR PROSPECTING COURSES (OVER 100 ADULTS ANNUALLY).
- 0138 ALTHOUGH I DO NOT RECEIVE THE MONTHLY INFORMATION CIRCULAR I HAVE ACCESS TO IT AT MY PLACE OF BUSINESS. DOCUMENTS INDICATED TO BE USED WEEKLY, ACTUALLY MORE FREQUENT BUT NOT DAILY.

- 0145 I THINK THAT EVERY ENCOURAGEMENT SHOULD BE GIVEN TO GSC PERSONNEL TO PUBLISH IN THE LITERATURE, EXCEPT WHERE LENGTHY MONOGRAPHS (MEMOIRS) ARE CONCERNED. THESE LAST DOCUMENTS WILL HAVE A RELATIVELY SPECIALIZED BUT VERY IMPORTANT USAGE. AS FAR AS SHORTER PAPERS, PRESENTING NEW IDEAS AND FACTS, THESE ARE BURIED IF THE GSC PUBLISHES THEM WITH THE EXCEPTION OF CERTAIN REMARKABLE PAPERS WHICH SEEM TO LIVE THROUGH THE BURIAL. THERE IS SIMPLY NOT ENOUGH TIME (OR MONEY WITH LIBRARIES OUTSIDE CANADA) TO KEEP ABREAST OF PUBLICATIONS OF NATIONAL (I'M THINKING INTERNATIONALLY HERE, I.E. KEEPING ABREAST WITH PAPERS PUBLISHED BY ALL THE IMPORTANT SURVEYS OF THE WORLD) OR PROVINCIAL SURVEYS.
- 0157 ALSO USE DATA PRODUCED BY MINISTRY OF NATURAL RESOURCES, ONTARIO, AND PUBLICATIONS RELATED TO GEOTECHNICAL ENGINEERING.
- 0186 DOCUMENTS GOOD AS FAR AS THEY GO. MAIN PROBLEM IS DELAY IN PUBLICATION. FOR EXAMPLE LEAD ISOTOPIC DATA AVAILABLE IN THE SURVEY OBTAINED SOME YEARS AGO HAS NOT BEEN PUBLISHED AND IS NOT AVAILABLE. THIS IS IN CONTRAST WITH ISOTOPIC AGE DATA WHICH ARE PUBLISHED ANNUALLY.
- 0194 TIME LAPSE BETWEEN GENERATION OF INFORMATION AND PUBLICATION OFTEN VERY LONG. THE NUMBER OF MEMOIRS, BULLETINS PAPERS ETC., HAS DROPPED IN RECENT YEARS INDICATING AN UNDULY LONG PROCESSING OF REPORTS, OR INADEQUATE AMOUNT OF WRITING. IN LINE WITH ODM PRACTICE, DEADLINES SHOULD EXIST AND STRICTLY ADHERED TO.
- 0202 ORAL PRESENTATION AT MEETINGS, ESPECIALLY IF THEY CAN BE OBTAINED ONLY IN TAPE FORM OR THROUGH PERSONAL CONTACT.
- 0215 MUCH OF THE GRASS ROOTS COMPILATION OF DATA IS DONE FOR ME SO THAT I DO NOT PERSONALLY USE THE DOCUMENTS AS FREQUENTLY AS OTHER GEOLOGISTS WITHIN OUR ORGANIZATION.
- 0224 I HAVE WRITTEN PROPOSALS FOR THE SASKATCHEWAN RESEARCH SCHOLARS GRANT FOR PROJECTS IN PALYNOLOGY AND MICROPALAEONTOLOGY.
- 0258 I FIND DATA IN MEMOIRS, BULLETINS AND PAPERS USEFUL IN MOST OF MY GEOLOGICAL AND GEOCHEMICAL COMPILATIONS RESPECTING CANADA AND OTHER COUNTRIES IN CERTAIN CASES. GEOCHEMICAL MAPS ARE ESPECIALLY GOOD FOR BACKGROUND INFORMATION ON ELEMENTAL CONTENTS OF SEDIMENTS, ROCKS, ETC.
- 0301 I USUALLY CHECK GSC MAPS AND PUBLICATIONS OF AREAS I'M WORKING TO SEE IF THERE IS ANY USEFUL INFORMATION OR SEEDS OF (OR FOR) IDEAS. LESS OFTEN I USE GSC DATA AS A SOURCE OF SPECIAL DATA.

- 0303 COMPANY MAKES EXTENSIVE USE OF GSC PUBLICATIONS AS SOURCES OF DATA UPON WHICH IT BASES MANY EXPLORATION PROGRAMS. UNFORTUNATELY MANY MAPS AND PUBLICATIONS ARE 'OUT OF PRINT' WHICH CAUSES PROBLEMS IF WE WISH TO TAKE THEM OUT IN THE FIELD AS WORKING REFERENCES. ANOTHER PROBLEM IS THAT MANY MAPS ARE OUTDATED, WHICH HINDERS PEOPLE THAT DO NOT HAVE A LARGE 'PRIVATE' DATA BASE WHEN PLANNING EXPLORATION PROGRAMS. THE OPEN FILE SYSTEM IS A GOOD IDEA AND DOES SPEED UP NEW MAP PUBLICATIONS. I THINK THIS SERVICE SHOULD BE EXPANDED.
- 0307 THE USE OF PUBLICATION IS HARD TO QUANTIFY. SOMETIME I WILL USE THEM EVERYDAY WHILE OTHER TIMES I'LL NOT USE ANY FOR WEEKS.
- 0319 MONTHLY INFORMATION CIRCULARS MAY BE RECEIVED BY THE COMPANY LIBRARY BUT NOT PERSONALLY.
- 0345 BEING A FORMER OFFICER OF THE GSC, I HAVE MANY CONTACTS THERE THAT I FIND VERY HELPFUL, AND OF COURSE I AM AWARE OF THE VAST AMOUNT OF UNPUBLISHED INFORMATION AVAILABLE IN FIELD NOTES, PLOTTED SECTIONS, AND OTHER DATA.
- 0346 COMMENTS: LIBRARY IN OTTAWA, VISITS TO BIO-AGC. I DO THINK THE JUMP FROM MONTHLY TO YEARLY IS TOO BIG.
- 0353 MOST OF THE PROJECTS I HAVE BEEN INVOLVED WITH ARE OUTSIDE CANADA. THE ABOVE RESPONSE REPRESENTS THE DEGREE OF USE MADE OF THE OUTPUT IN THE PAST YEAR RELATED TO CANADIAN PROJECTS AND IS TYPICAL OF WHAT IS USUALLY USED.
- 0371 THE PROVINCIAL DEPARTMENTS HAVE MORE INFORMATION ON THE PROVINCES THAN THE GSC. IF WORKING IN THE ARCTIC AREA, THEN THE GSC WOULD BE A MUST.
- 0376 I USE GSC DATA TO GENERATE IDEAS FOR MINERALS EXPLORATION. THE ACTUAL USE VARIES WITH THE SEASON, I.E. MAPS REFERRED TO DAILY DURING THE FIELD SEASON TEND TO GATHER DUST OVER WINTER.
- 0377 GSC PUBLICATIONS MOST USED IN MY AREA OF WORK ARE BASIC DATA TYPES I.E. 1:250,000 MAPS, GEOCHRONOLOGY. IN C-5 EXTERNAL PUBLICATIONS USED ARE MAINLY PAPERS PUBLISHED IN SCIENTIFIC JOURNALS. HARD COPY IS OFTEN USEFUL ONLY AS A BASIC REFERENCE BECAUSE THEY TAKE SO LONG TO PUBLISH THAT IDEAS ARE OFTEN OUTDATED.
- 0403 (1) REGULAR (6 TO 8 TIMES PER YEAR) STAFF TECHNICAL MEETINGS ARE CONSIDERED AS GOOD SOURCE OF INFORMATION AS WELL. (2) PUBLICATIONS OF THE SASKATCHEWAN GEOLOGICAL SURVEY. (3) PUBLICATIONS OF THE SASKATCHEWAN RESEARCH COUNCIL. (4) ECONOMIC GEOLOGY BULLETIN, JOURNAL OF GEOCHEMICAL EXPLORATION ETC.

- 0411 COMMENTS: MOST OF MY PRESENT GEOLOGICAL INTERESTS ARE IN ONTARIO AS THAT IS WHERE MOST OF MY FIELD EXPERIENCE HAS BEEN, ALSO, MY MSC. THESIS (IN PROCESS) IS BEING DONE IN NORTHERN ONTARIO. FOR THESE REASONS I TEND TO REFER MORE TO O.G.S. PUBLICATIONS WHICH ARE FREQUENTLY MORE RELEVANT TO MY WORK.
- 0412 COMMENTS: THE CALGARY STAFF ARE VERY HELPFUL IN THEIR INDIVIDUAL FIELDS.
- 0452 THE FREQUENCY OF USAGE VARIES CONSIDERABLY FOR ME BECAUSE IT DEPENDS ON THE TYPE OF JOB I AM ASSIGNED. A REFERENCE STUDY USES MUCH MORE DOCUMENTATION AND RESEARCH INTO EXISTING DATA THAN WORK INVOLVING TESTING PROGRAMS. IN THE CONSULTING FIELD OF WORK, IT IS IMPOSSIBLE TO PREDICT OR ANTICIPATE ONE'S REQUIREMENTS IN THIS ASPECT.
- 0481 GSC OUTPUT USED IN IDENTIFYING KING AND CHEMICAL MATERIAL IN ORDER TO PREDICT ENVIRONMENTAL IMPACT - HEAVY METAL POLLUTION; EROSION; DRAINAGE ETC.
- 0489 INFORMATION FROM MEMOIRS, BULLETINS, PAPERS, BEDROCK AND SURFICIAL MAPS, USED IN SOIL SURVEY, PREPLANNING AND FIELD SURVEY. THEY ARE IMPORTANT WHEN USED BUT ARE NOT USED FREQUENTLY.
- 0491 C-3&C-4: FIRST PUBLICATIONS OF THE GSC (I.E. 1840'S-1880'S) ARE SCARCE AND BECAUSE THEY CONTINUE TO BE USEFUL I BELIEVE THEY SHOULD BE REPRINTED, CONSECUTIVELY A FEW AT A TIME (BY OFF-SET) OR ISSUED IN MICROFICHE. IN GENERAL THE G.S.C. OUTPUT IS EXCELLENT, EXCEPT THERE SHOULD BE MORE EMPHASIS ON THE PUBLICATION OF THE E.G. SERIES OR VERSIONS THERETO.
- 0495 I WANT TO RECEIVE THE MONTHLY INFORMATION CIRCULAR OF THE G.S.C.

SECTION C6

- 0087 INDIRECT YES
- 0310 "DIRECT ECONOMIC BENEFIT" IS A CONTENTIOUS EXPRESSION REQUIRING A DEFINITION. IN MY CASE IT IS "DIRECT" OVER LONG TERM BECAUSE OF BENEFICIAL USE OF THE PUBLISHED INFORMATION, BUT IT WOULD BE IMPOSSIBLE TO PLACE A VALUE ON IT.
- 0474 INDIRECTLY

- 0481 IN A GENERAL WAY THE INFORMATION FROM GSC DOCUMENTS PROVIDE SPECIFIC DATA ON REFERENCE MATERIAL REQUIRED IN MAKING AN ENVIRONMENTAL IMPACT ASSESSMENT.
- 0500 LIBRARY MATERIAL THAT WOULD NOT BE AVAILABLE.

SECTION C7

- 0087 INDIRECT YES
- 0474 INDIRECTLY

SECTIONS C6 TO C7

- 0223 I ASSUME YOU DON'T INCLUDE MY PAYCHEQUE.
- 0301 I USE GSC PUBLICATIONS FOR DATA TO INTEGRATE INTO MY SUBSURFACE AND GEOPHYSICAL MAPS. IT IS AMAZING WHAT "CLUES" LIE TUCKED AWAY IN THE MEMOIRS, BULLETINS, PAPERS, ETC.

SECTION C8

- 0011 MAPS
- 0012 ALL ECONOMIC BENEFITS WOULD BE INDIRECT, IN TERMS OF GETTING OR UPDATING SOME INFORMATION.
- 0035 MUCH OF GSC "OUTPUT" HAS NOW BEEN TAKEN OVER BY PROVINCIAL SURVEYS; MUCH OF THE "DECLINE" IN THE GSC CAN BE ATTRIBUTED TO THIS FACTOR.
- 0036 REGIONAL MAPPING AND GEOLOGICAL STUDIES THAT THE SURVEY IS NOTED FOR WOULD NOT BE PERFORMED IF THE SURVEY WASN'T THERE.
- 0040 GSC MEMOIRS, BULLETINS, PAPERS, MAPS, ETC., ARE A CHEAP SOURCE OF GEOLOGICAL DATA WHICH WITH A FEW EXCEPTIONS ARE NOT AVAILABLE TO THE AVERAGE PERSON FROM THE STREET (PUBLIC)
- 0050 THE GSC DOCUMENTS PROVIDE AN INDIRECT BENEFIT TO THE

PROVINCE IN THAT THEY EITHER HELP IN THE FORMULATION OF PROVINCIAL-FEDERAL PROGRAMS DESIGNED TO ENCOURAGE INVESTMENT OR DIRECTLY SERVE TO ATTRACT INDUSTRY INVESTMENT.

- 0064 MUCH USE IS MADE OF THE ONGOING GEOLOGICAL MAPPING ON A REGIONAL BASIS IN THE YUKON TERRITORY SPECIFICALLY AND ELSEWHERE ON A LESSER SCALE. THIS WORK IS INVALUABLE TO US IN GAINING A BETTER PERSPECTIVE ON OUR OWN PROJECTS.
- 0065 REGIONAL GEOLOGICAL MAPPING IS MOST IMPORTANT.
- 0069 COST CONSTRAINTS WOULD SEVERELY RESTRICT THE AMOUNT OF OUTPUT THAT COULD BE REPLACED, THUS ONE WOULD DO WITHOUT THE OUTPUT.
- 0087 HOW DO YOU DEFINE "DIRECT"? IF THE GSC DID NOT MAKE GEOLOGIC MAPS, THEY PROBABLY WOULD NOT BE MADE. ACADEMICS ARE NOT ABLE, AND PROVINCIAL SURVEYS PREFER NOT TO.
- 0091 ALL MEMOIRS MAPS BULLETINS PAPERS
- 0092 I DO NOT UNDERSTAND C-8. DOES ONE ASSUME THAT SOMEONE ELSE COULD OR WOULD DO MAPPING, IF THE GSC STOPPED?
- 0102 TALKS GIVEN BY OTTAWA-BASED GSC GEOLOGISTS AT GAC ANNUAL MEETINGS AND BY VANCOUVER-BASED GEOLOGISTS AT GAC CORDILLERAN DIVISION ANNUAL MEETINGS IN VANCOUVER ARE INVALUABLE IN MY OPINION; ALSO THE TALKS GIVEN BY GSC PERSONNEL AT THE FALL MEETINGS IN WHITEHORSE, YELLOWKNIFE.
- 0106 THE GSC MAPPING PROGRAM IS A VITAL ASSET OF EVERY MINING COMPANY INVOLVED IN MINERAL EXPLORATION IN CANADA.
- 0127 BASIC MAPPING - BEDROCK AND SURFICIAL SINCE THE N.S. DEPT. MINES DOES NOT DO QUADRANGLE MAPPING THE GSC HAS LEFT A BIG AND WIDENING GAP WITH THEIR WITHDRAWAL.
- 0129 OUR REVENUE FROM OUR SALES OUTLET IS DIRECTED BACK TO OTTAWA. A NUMBER OF OUT OF PRINT PUBLICATIONS ARE NOT AVAILABLE NOW EXCEPT ON MICROFICHE - THIS AFFECTS OUR USE OF THE DOCUMENTS AS WELL AS OUR SALES OF SAME.
- 0133 MAPS
- 0140 QUESTIONS C-6 AND C-7 ARE UNCLEAR. MOST OF THE BENEFITS OF THE GSC DOCUMENTS ARE LONG-TERM. THE DATA BASE - PARTICULARLY THE GEOLOGICAL MAPS - ALLOW EFFICIENT USE OF EXPLORATION FUNDS.
- 0145 OBVIOUSLY - REGIONAL MAPPING, PROVISION OF STATISTICS ON CANADIAN ORE AND ENERGY OCCURRENCES, ARE EXPENSIVE

FEATURES TO REPRODUCE IN OTHER WAYS.

0147 NON-APPLICABLE

0157 I BELIEVE ALL OF IT WOULD BE DIFFICULT TO REPLACE.

0163 MAPS AND REPORTS

0171 MAJOR INDIRECT BENEFIT. WE DON'T HAVE TO DO REGIONAL MAPPING.

0173 MORE ACADEMIC TYPE RESEARCH COULD BE DONE IN UNIVERSITIES AND INSTITUTIONS. PROVINCIAL AGENCIES COULD PROVIDE MORE REGIONAL COVERAGE AND KNOWLEDGE OF GEOLOGY.

0174 MEMOIRS/BULLETINS WITH GEOLOGIC MAPS.

0186 MOST GSC OUTPUT WOULD BE ESSENTIALLY IMPOSSIBLE TO DUPLICATE IN MY CASE, COST WOULD BE EXHORBITANT FOR INDIVIDUALS TO DUPLICATE THE EXTENSIVE BASIC GEOLOGICAL INFORMATION APART FROM ANYTHING ELSE.

0188 WOULD BE DIFFICULT TO IMPOSSIBLE FOR AN INDIVIDUAL TO REPLACE MOST COMPONENTS OF GSC OUTPUT.

0190 G.S.C. DATA INDISPENSIBLE.

0191 BACKGROUND DATA ON AN AREA IS ESSENTIAL FOR MOST SMALL CONSULTING JOBS, OTHERWISE THEY WOULD BE PROHIBITIVELY EXPENSIVE FOR CLIENTS.

0194 THERE IS NO OTHER DATA FILE THAT PRODUCES REGIONAL DATA OF REASONABLY SIMILAR QUALITY.

0195 GSC MAPS, MEMOIRS, ETC., CANNOT READILY BE REPLACED WHEN OUT OF PRINT.

0202 BASIC GEOLOGICAL INFORMATION IN THE FORM OF MAPS AND REPORTS AND AIRBORNE GEOPHYSICAL (MAGNETIC, RADIOMETRIC, AND EM).

0204 AS AN INDIVIDUAL, MOST GSC OUTPUT COULD NOT BE REPLACED AT ALL; AS A MEMBER OF AN EXPLORATION ORGANIZATION, MOST OF THE GSC OUTPUT COULD BE REPLACED, THOUGH NOT READILY, BY PRIVATE CONSULTANT OR IN-HOUSE SURVEYS.

0214 ALL COMPONENTS USED WOULD NOT BE REPLACED, GSC OUTPUT BEING VERY HELPFUL, BUT NOT AN ABSOLUTE NECESSITY.

0215 I USE GEOLOGICAL MAPS AS A BASIC REFERENCE TOGETHER WITH REPORTS, GEOCHEM AND GEOPHYSICAL DATA. IT WOULD BE VERY EXPENSIVE TO START EXPLORATION IN AREAS WITHOUT THIS BASE.

- 0217 MAPS, LOCAL TO REGIONAL SCALES SURVEY PARTICIPATION IN SYMPOSIA, FIELD EXCURSIONS, EXTERNAL COMMITTEES. MOST PAPERS, BULLETINS, OPEN FILE REPORTS, ETC.
- 0220 MAPS OF ALL KINDS. MEMOIRS, BULLETINS, PAPERS, GSC LIBRARY ACQUISITION LISTS.
- 0223 PERSONAL ADVICE AND ALL PUBLICATIONS CONCERNING AREAS NOT WORKED IN BY ANOTHER GOV'T SURVEY AND COMPILATIONS FROM AREAS THAT ARE.
- 0225 MEMOIRS, BULLETINS, ETC.
- 0230 RESEARCH RESULTS OF GEOCHEMICAL SECTIONS OF GSC WOULD BE DIFFICULT TO REPLACE.
- 0233 ANYTHING COULD BE REPLACED DEPENDING ON THE NEED AND BUDGET.
- 0235 VIRTUALLY ALL GSC MAPPING, GEOCHEM SURVEYS ETC. WOULD BE EXTREMELY DIFFICULT TO DUPLICATE. RESULTS OF LAB WORK AND COMPUTER ANALYSIS OF DATA ETC. LIKEWISE WOULD BE VERY DIFFICULT TO REPLACE BOTH FOR EXPERTISE OF PERSONS INVOLVED AND COST.
- 0255 COMMENT: BASIC REFERENCE MATERIAL IN THE FORM OF GEOLOGIC MAPS, SECTIONS, LITHOLOGIC DESCRIPTIONS AND STRUCTURAL DISCUSSIONS ARE VITAL IN DETAIL SURFACE MAPPING OF ANY AREA.
- 0257 COMMENT: RE: C-7/C-8/C-9 - DIRECT BENEFIT IN THE SENSE THAT THE GSC PUBLICATIONS AND PEOPLE FACILITATE MY WORK. HOWEVER, IF THE G.S.C. DID NOT EXIST THE WORK BY INDUSTRY MIGHT BE INCREASED.
- 0258 NOT APPLICABLE IN MY CASE.
- 0264 QUESTIONS NOT REALLY APPLICABLE TO MY FIELD.
- 0265 COMMENT: MUSEUM CURATORS HAVE NOT THE TIME OR FUNDING FOR LARGE SCALE FIELD WORK. WE RELY ON GSC REPORTS AND DATA FOR CHOICE OF FIELD AREA.
- 0276 BEST SOURCE FOR SURFICIAL AND BEDROCK GEOLOGICAL INFORMATION.
- 0287 CERTAINLY REGIONAL GEOLOGY STUDIES NOT EASILY REPLACED.
- 0294 LIBRARY AND PUBLICATION SALES OFFICES; ACCESS TO SAMPLE AND CORE STORAGE. CONSULTATION WITH GSC STAFF RE REGIONAL FIELD GEOLOGY.
- 0298 SPECIAL GSC MEMOIRS, BULLETINS ON OLD AREAS.

- 0301 WHAT WOULD BE HARD TO REPLACE WOULD BE THE CONSTANT FLOW OF BY AND LARGE CONSISTENTLY GOOD MATERIAL EACH PIECE OF WHICH MAY CONTAIN SOMETHING THAT TO ME IS USEFUL AND/OR VALUABLE.
- 0303 C6 AND C7 - YES - REGIONAL MAPPING PROGRAMS BY THE GSC ELIMINATE MANY HIGH COST 'GRASS ROOTS' MAPPING TYPE PROGRAM AND SAVES THE INDUSTRY ENORMOUS AMOUNTS OF MONEY BECAUSE THERE IS NO NEED FOR PRIVATE COMPANIES TO DUPLICATE THIS SERVICE. GSC OFFICERS FAMILIAR WITH REGIONAL GEOLOGY ARE VERY HELPFUL IN SOLVING MAPPING PROBLEMS THAT MANY PRIVATE COMPANIES MAY HAVE MERELY BY A PHONE CALL OR PRIVATE OFFICE VISIT.
- 0307 ANY SERVICE COULD BE REPLACED, BUT THE COST OF THAT SERVICE MAY BE EXTREMELY HIGH AS IT WOULD BE PAID OVER AND OVER AGAIN AS EACH COMPANY HAD TO COMPLETE THE SAME SERVICE I.E. MAPPING THE GREENWOOD SHEET.
- 0310 ANYTHING (ALMOST AT LEAST) CAN BE REPLACED GIVEN SUFFICIENT TIME AND MONEY, BUT IS NOT PRACTICAL.
- 0312 E.G. MAGNETIC COVERAGE, GRAVITY COVERAGE
- 0314 CERTAIN BULLETINS AND ECONOMIC GEOLOGICAL SERIES WE USE COULD NOT BE READILY REPLACED IF NOT AVAILABLE.
- 0319 THE INFORMATION PROVIDED BY GSC DOCUMENTS SERVES A USEFUL PURPOSE. THE INFORMATION MAY OR MAY NOT BE NECESSARY FOR THE ECONOMIC EVALUATION OF ANY GEOLOGICAL PROSPECT. INFORMATION THAT IS REQUIRED FOR AN EVALUATION WILL BE ACQUIRED FROM WHATEVER SOURCE NECESSARY IF THE NEED IS JUSTIFIED.
- 0320 DOCUMENTS THAT DEAL WITH REGIONAL STRUCTURAL AND DEPOSITIONAL TRENDS ARE ALMOST ENTIRELY GSC WITH THE EXCEPTIONS OF THE R.C. ALTA AND D.M.R. (SASK) BULLETINS. WITHOUT THOSE GSC DOCUMENTS THERE WOULD OFTEN BE NO INFORMATION AVAILABLE AT ALL FOR CERTAIN AREAS. COMMENT: WE WOULD PROBABLY TRY TO GET BY WITHOUT REPLACING THE DATA. THEREFORE, NO MORE STAFF AND CONSULTANTS.
- 0330 REGIONAL MAPPING PROJECTS.
- 0332 COULD NOT READILY BE REPLACED COMMENT: UNIFORM REGIONAL COMPILATION OF DATA INTO IDEAS BY AREA-SPECIFIC PROFESSIONALS; SYSTEMATIC REGIONAL COMPILATION OF BASIC DATA I.E. AGE DATES, GEOLOGICAL MAPPING, GEOPHYSICS AND GEOCHEMISTRY.
- 0336 FOR SOME AREAS THE GSC OUTPUT IS A UNIQUE SOURCE OF DATA (E.G. GEOCHEMICAL).
- 0339 BASIC REGIONAL GEOLOGICAL MAPPING.

- 0340 MOST PROJECTS MUST BE RESTRICTED TO A "PROPERTY". THE REGIONAL COMPONENT ELIMINATES MYOPIA (IF USED) AND DIALOGUE WITH GSC PERSONNEL TENDS TO STIMULATE ACTIVITY IN THE PROJECT AREA AS NEW IDEAS ARE TRIED OUT.
- 0345 DIFFICULT TO ANSWER C6 AND C7 - IF KEY WORD IS DIRECT, THEN REPLY MUST BE NO IN 99% OF CASES. IN PETROLEUM EXPLORATION THE BENEFIT HAS TO BE THROUGH INDIRECT MEANS.
- 0346 COMMENT: IF YOU WERE NOT DOING ANY MARINE GEOLOGY GEOPHYSICS THEN CLEARLY CERTAIN REGIONAL ASPECTS OF THE WORK BE LOST AND ACCESS WOULD BE LOST.
- 0353 BASICALLY INTERESTED ONLY IN ROCK TYPES AND SURFICIAL GEOLOGY AT PROJECT SITE. WE USUALLY MAP IN DETAIL ANYWAY, THEREFORE GSC MAPS ONLY PROVIDE GUIDE AS TO REGIONAL GEOLOGY AND STRUCTURE.
- 0366 IF PROVINCIAL ORGANIZATIONS ARE ABLE TO REPLACE THE GSC AT THE PRODUCTION LEVEL, THAT IS MAPS, AIRBORNE SURVEYS ETC. AND UNIVERSITIES ARE FUNDED FOR RESEARCH AND GENERAL SYNTHESIS WORK THEN GSC ROLE WOULD NOT BE SO ESSENTIAL.
- 0367 BAD QUESTION. COMMENTS: C-8 AND C-9 ARE BAD QUESTIONS BECAUSE GSC OUTPUT REPRESENTS A SCIENTIFIC POOL OF DATA ON WHICH NO DOLLAR VALUE CAN BE PUT. I WOULD COMPARE THE VALUE TO THAT OF A UNIQUE PAINTING. IF WE MISSED IT WE WOULD SUFFER.
- 0374 MAPS, BULLETINS ETC. REGIONAL SURVEY MATERIAL OTHERWISE UNAVAILABLE.
- 0376 COMMENT: SYNTHESIS OF ECONOMIC DATA ARE NOT READILY AVAILABLE. REGIONAL GEOLOGICAL DATA WOULD BE COSTLY AND TIME CONSUMING TO OBTAIN.
- 0378 GEOLOGICAL MAPS, MEMOIRS AND PAPERS.
- 0379 REGIONAL GEOLOGICAL AND GEOPHYSICAL SURVEYS. RESOURCE EVALUATION. REGIONAL SURVEYS COULD NOT BE PRACTICALLY REPLACED IN PRIVATE SECTOR.
- 0381 THE FREE (NOT IN FINANCIAL TERMS) EXCHANGE OF IDEAS AND FACTUAL INFORMATION WITH KNOWLEDGEABLE GSC STAFF IS INVALUABLE IN THE HIGHLY COMPETITIVE ENERGY FIELD.
- 0402 COMMENT: NOT SURE WHAT "DIRECT" MEANS PRECISELY.
- 0403 COMMENT: AEROMAGNETIC MAPS, ECONOMIC GEOLOGY SERIES, BEDROCK GEOLOGICAL MAPS.
- 0405 COMMENT: BASIC GEOLOGICAL MAPPING RESEARCH FIELD

PARTIES, ETC., OF FUNDAMENTAL VALUE.

- 0409 COMMENT: RELATIVELY UNEXPLICABLE.
- 0410 COMMENT: REGIONAL GEOLOGY, GEOLOGICAL COMPILATION, GEOCHEMICAL SURVEYS (RECONN), AEROMAG SURVEYS.
- 0412 COMMENT: OFTEN THE GSC IS THE ONLY PLACE TO PUBLISH MANY WELL BOUND REFERENCES THAT WOULD, DOUBTLESS, NOT BE OTHERWISE PUBLISHED AT TODAY'S REPRODUCTION AND BINDING COSTS.
- 0415 COMMENT: YES - MAPS AND BULLETINS. COST RETURNS ARE INDIRECT. G.S.C. DATA PROVIDES BASIS OF TERRAIN EVALUATION PRIOR TO TIMBER HARVESTING.
- 0418 COMMENT: OUT-OF-PRINT MEMOIRS
- 0422 COMMENT: C-8 - ALL OF GSC INFORMATION I USE IS NOT AVAILABLE FROM OTHER SOURCES AT ALL, AND THEREFORE NOT REPLACEABLE IF NOT AVAILABLE FROM G.S.C.
- 0423 CONSIDERABLE BEDROCK LITHIOLOGY AND STRUCTURAL DATA ONLY AVAILABLE FROM SURVEY - USUALLY GOOD QUALITY WORK.
- 0424 IT IS CONCEIVABLE THAT INFORMATION MADE AVAILABLE IN MEMOIRS, BULLETINS, AND PAPERS MIGHT BE ALTERNATIVELY PUBLISHED IN NON-GOVERNMENT JOURNALS, BUT THERE IS NO VIABLE ALTERNATIVE FOR MAPPING DATA RELEASE.
- 0431 COMMENT: CERTAIN WORK DONE BY G.S.C. IS OF VALUE, BUT MUCH OF THIS WORK COULD BE DONE BY LOCAL GROUPS ESPECIALLY PROVINCIAL AGENCIES. THIS WORK WOULD BENEFIT THE LOCAL PEOPLE MORE ECONOMICALLY THAN WORK DONE BY THE G.S.C.
- 0432 COMMENT: IT WOULD BE DIFFICULT TO REPLACE MAPS AND REPORTS. VERY FEW AGENCIES ARE CAPABLE OF PRODUCING SMALL SCALE MAPS SUCH AS THESE OF THE G.S.C.
- 0433 COMMENT: MOST PROVINCIAL SURVEYS ARE INVOLVED WITH SIMILAR STUDIES THROUGH THE AREAS OF THEIR PARTICULAR JURISDICTION - HOWEVER, ONLY G.S.C. PROVIDES INFORMATION (GEOL. GEOCHEMICAL, GEOPHYSICS) IN AREAS OF THE YUKON AND (N.W. TERRITORIES)
- 0435 COMMENT: I'M NOT SURE I UNDERSTAND THIS QUESTION. NONE OF THE GSC PUBLICATIONS RECEIVED BY OUR LIBRARY COULD BE REPLACED BY COMPARABLE MATERIAL.
- 0436 COMMENT: REGIONAL STUDIES - PUBLICATIONS.
- 0438 COMMENT: PALEONTOLOGICAL, STRATIGRAPHIC, AND REGIONAL MAP INFORMATION.

- 0443 COMMENT: C-8 ESPECIALLY CURRENT RESEARCH.
- 0444 COMMENT: LITTLE INFORMAL CONTACT, COULD DERIVE BENEFIT IF MORE CONTACT.
- 0445 COMMENT: RE: C-8 - REGIONAL GEOLOGY AND GEOPHYSICAL DATA.
- 0450 COMMENT: COMMODITY/RESERVE DATA.
- 0452 IT WOULD BE IMPOSSIBLE FOR ME TO ACQUIRE THE FIELD AND LABORATORY INFORMATION DIRECTLY, THAT IS REPORTED IN THE VARIOUS PUBLICATIONS.
- 0454 SEVERAL OF MY PERSONAL DISCOVERIES OF NEW MINERAL OCCURRENCES WOULD NOT HAVE BEEN MADE WITHOUT THE USE OF DATA SUPPLIED BY THE GSC. PRIVATE RESEARCH WOULD HAVE BEEN BEYOND MY MEANS.
- 0455 COMMENT: GEOLOGICAL MAPS REGARDLESS OF WHICH PUBLICATION CONTAINS THEM.
- 0456 GEOLOGICAL REPORTS, MAPS, AEROMAGNETIC MAPS.
- 0457 COMMENT: REGIONAL MAPPING PROGRAM PROVIDES FRAMEWORK FOR DETAILED STUDIES AND BACKGROUND FOR SYNTHESSES.
- 0458 COMMENT: SOME DEPARTMENT OF MINES ANNUAL REPORTS MIGHT SUPPLEMENT BUT WOULD NOT ENTIRELY REPLACE GSC DOCUMENTS.
- 0460 COMMENT: C-8, URANIUM RECONNAISSANCE PROGRAM GEOCHEMICAL RAW DATA, AEROMAGNETIC MAPS.
- 0467 COMMENT: GEOLOGICAL AND GEOPHYSICAL MAPS. GEOLOGICAL RESEARCH.
- 0470 COMMENT: ALL BASIC REPORTING ON AREAS, REGIONAL ASPECTS OF GEOPHYSICS AND GEOCHEMISTRY WOULD BE QUITE IMPOSSIBLE FOR MY SMALL ECONOMIC CAPABILITIES TO REPLACE. I WOULD LIKE TO SEE THE "FREE ADVICE" FACILITY EXPANDED; E.G. ORE PETROGRAPHY, CHARACTERISTICS OF MINERAL EXTRACTABILITY (SUCH AS U.S.B.M. DOES).
- 0474 COMMENT: WHO EVER WROTE THIS NEVER READ IT???
- 0480 COMMENT: REGIONAL AND SPECIFIC STUDIES OF SURFICIAL AND BEDROCK GEOLOGY ARE ONLY SOURCE OF INFORMATION IN MANY CASES.
- 0481 GSC ONLY SOURCE OF MOST GEOLOGICAL INFORMATION REQUIRED.
- 0489 GOVERNMENT BUDGETARY RESTRAINTS PREVENT US FROM EXPANDING, THEREFORE, WE COULD NOT PICK UP THE WORK. IT JUST WOULD NOT BE DONE.

- 0490 COMMENT: C-8: SURFICIAL GEOLOGY MAP AND REPORT INFORMATION.
- 0491 COMMENT: E.G. SERIES COULD NOT BE READILY REPLACED AS ITS PREPARATION DRAWS UPON THE ENTIRE SPECTRUM OF G.S.C. SUPPORT.
- 0499 COMMENT: C-8-SOME OF THE WORK DONE AT GSC IS UNIQUE AND IS NOT DUPLICATED ANYWHERE ELSE.
- 0505 PUBLICATIONS-MAPS, MEMOIRS, PAPERS, BULLETINS, ARE IRREPLACEABLE IN GEOLOGICAL RESEARCH.

SECTIONS C7 TO C8

- 0500 EXCHANGES WITH OVERSEERS AT BROAD GEOLOGICAL SECTORS.

SECTION C9

- 0006 STAFF \$ CONSULTANT SERVICES \$ X .
CANNOT GIVE ANY REALISTIC COST FIGURE.
- 0018 STAFF \$ CONSULTANT SERVICES \$ X ?
- 0050 DREE-NEW BRUNSWICK COST SHARED PROGRAMS HAVE MADE IT POSSIBLE FOR THE PROVINCE TO REPLACE IN LARGE PART WHAT FORMERLY WERE COMPONENTS OF GSC OUTPUT. THE COST HAS BEEN THROUGH ENGAGING CONSULTING SERVICES AND HIRING OF PEOPLE ON TERM (USUALLY 5-YEAR) BASIS. SINCE WE HAVE ACCELERATED AND BROADENED THE FORMER OUTPUT OF THE GSC TO INCLUDE MORE DIRECT ECONOMIC DEVELOPMENT ACTIVITIES, IT IS DIFFICULT TO ESTIMATE WHAT THE ANNUAL COST WOULD HAVE BEEN FOR REPLACING THE GSC LEVEL OF ACTIVITY.
- 0064 TO ACHIEVE A BROAD BASED UNDERSTANDING OF REGIONAL GEOLOGY ETC., WOULD COST MORE THAN DIRECT STAFF COSTS, THE TIME CONSUMED INFRASTRUCTURE COSTS ETC. WOULD PROBABLY RENDER SUCH A PROGRAM COST INEFFECTIVE. THE EXPOSURE REQUIRED TO GAIN BACKGROUND INFORMATION WOULD ALSO MAKE IT IMPOSSIBLE TO EFFECTIVELY REPLACE A GSC FIELD GEOLOGIST
STAFF \$ 50,000 CONSULTANT SERVICES \$ 25,000
- 0065 STAFF \$ 50,000.00 CONSULTANT SERVICES \$ 25,000.00.
- 0068 STAFF \$ CONSULTANT SERVICES \$ 5,000.

- 0069 STAFF \$ 250,000 CONSULTANT SERVICES \$
THE ABOVE COST ESTIMATE IS A GUESS| NO COST ESTIMATE FOR
THE TIME FACTOR IS INCLUDED.
- 0087 THE QUESTION IS AMBIGUOUS. QUADRANGLE MAPS ARE USED BY
MANY PEOPLE FOR A VARIETY OF PURPOSES. THE COST PER
PERSON ON A REFERENCE BASIS IS MINIMAL. THE COST FOR A
GROUP OR ENTITY FOR ITS OWN ECONOMIC ENDS IS
PROHIBITIVE.
- 0088 HIRE ADDITIONAL EARTH PHYSICS STAFF TO DO THE JOBS.
- 0102 DON'T CONSIDER THIS QUESTION ANSWERABLE AS AN
INDIVIDUAL.
- 0106 STAFF \$100,000 CONSULTANT SERVICES \$
OUR COMPANY WOULD HAVE TO HIRE MORE GEOLOGISTS TO MAP
AREAS OF INTEREST BEFORE LAUNCHING A SPECIFIC DETAILED
PROGRAM IN THAT AREA. THESE GEOLOGISTS WOULD HAVE TO BE
KEPT MAPPING ON REGIONAL RECONNAISSANCE PROJECTS BEFORE
ANY DETAILED WORK COULD BE DONE.
- 0127 UNABLE TO COMMENT C-9.
- 0129 REPLACEMENT WOULD INVOLVE REPRINTING. I AM NOT FAMILIAR
WITH PUBLICATION COSTS.
- 0133 STAFF \$ CONSULTANT SERVICES \$30,000.00
COMMENTS - MAPPING
- 0138 STAFF \$ CONSULTANT SERVICES \$250,000.00
- 0140 STAFF \$X CONSULTANT SERVICES \$X
THIS QUESTION IS IMPOSSIBLE TO ANSWER SINCE MOST OF THE
BENEFITS ARE LONG-TERM.
- 0157 STAFF \$X CONSULTING SERVICES \$
INPUT THAT I WOULD NEED AT THE PRESENT TIME RELATES TO
GEOTECHNICAL RESEARCH.
- 0171 MIGHT NOT BE ABLE TO REPLACE QUALITY AT ANY PRICE. VERY
DIFFICULT PUT A FIGURE ON THIS BUT I EXPECT WE'D GET
LESS AND PAY MORE.
- 0173 STAFF \$X CONSULTANT SERVICES \$
ACADEMIC RESEARCH IS IN CRISIS FOR LACK OF STAFF AND, IN
SOME CASES, OF STUDENTS. AND IN OUR SYSTEM, ONLY
UNIVERSITIES ARE RESPONSIBLE FOR THE TRAINING OF THE
RESEARCH STAFF GOVERNMENT, INDUSTRIES AND ACADEMIA
NEEDS. IF UNIVERSITIES CANNOT ANY LONGER PRODUCE A
SIGNIFICANT FRACTION OF THE RESEARCH RESULTS IN ONE
FIELD, THEN TRAINING OF YOUNG SCIENTISTS TO REPLACE
AGING ONES CAN NO LONGER BE DONE.

- 0174 STAFF \$ CONSULTANT SERVICES \$50,000.00
- 0188 VIRTUALLY IMPOSSIBLE TO ESTIMATE CONSIDER GSC OUTPUT TO BE INVALUABLE.
- 0190 MY WORK WOULD NOT BE POSSIBLE WITHOUT G.S.C. DATA. SMALL COMPANIES CANNOT MAP CANADA.
- 0194 INSTEAD OF TAKING CANADIAN EXAMPLES IN CLASSROOM USE, NON-CANADIAN EXAMPLES WOULD REPRESENT THE BULK OF MATERIAL.
A \$ VALUE IS HARD TO PLACE ON "FOREIGN OWNERSHIP OF IDEAS".
- 0202 WOULD BE VERY HIGH AND OFTEN MUCH OF MY WORK COULD NOT BE CARRIED ON SATISFACTORILY.
- 0204 AS AN INDIVIDUAL, (AS IN THIS RESPONSE), I'D HAVE TO DO WITHOUT AS AN EXPLORATION COMPANY, WITHOUT GSC MAPS I'D HAVE TO SPEND MAYBE \$100,000 PER YEAR TO ACQUIRE EQUIVALENT INFO. FROM PRIVATE SOURCES.
- 0214 NOT APPLICABLE.
- 0215 STAFF \$ CONSULTANT SERVICES \$30,000. VERY VARIABLE.
- 0217 I AM NOT QUALIFIED TO GIVE COSTS FOR C-9. AS FOR REPLACING SURVEY OUTPUT WITH EXTERNAL SERVICES, I UNDERSTAND THAT MANY ASPECTS OF GEOPHYSICS AND GEOCHEMISTRY (ROUTINE FIELD SAMPLING, ANALYSES) ARE CONTRACTED OUT. BUT MOST GEOLOGIC OUTPUT REQUIRES A VIABLE BODY OF CO-OPERATING GEOLOGISTS, AND THE SURVEY WOULD SEEM A NECESSITY-WOULD HAVE TO BE SET UP FOR THIS PURPOSE, IF IT DID NOT ALREADY EXIST.
- 0223 I CAN'T AFFORD EITHER A OR B AND INDUSTRY WON'T.
- 0233 STAFF \$ CONSULTANT SERVICES \$X.
(CAN'T ANSWER THIS) THOUSANDS \$ PERHAPS. IF I NEED BASIC GEOLOGICAL DATA (MEMOIRS & MAPS FOR EXAMPLE) OF AN AREA, BUT IT IS NOT AVAILABLE. I DO MY OWN GEOLOGICAL SURVEY. IT'S NOT A BIG PROBLEM. INDEED GSC WORKS ARE TREATED (REGARDED) AS AUXILLARY DATA TO MY OWN OBSERVATIONS.
- 0235 STAFF \$100,000 CONSULTANT SERVICES \$500,000.
- 0236 STAFF \$ CONSULTANT SERVICES \$200,000.
- 0249 STAFF \$ CONSULTANT SERVICES \$X
- 0253 NOT APPLICABLE
- 0254 STAFF \$ CONSULTANT SERVICES \$X

0255 STAFF \$100,000 CONSULTANT SERVICES \$

0257 COMMENT: QUESTION NOT RELEVANT IN FORM STATED.

0258 NOT APPLICABLE IN MY CASE.

0264 NOT REALLY APPLICABLE TO MY FIELD.

0276 CAN'T DETERMINE COST.

0285 STAFF \$ CONSULTANT SERVICES \$2,000.

0287 DIFFICULT TO ANSWER.

0301 IT IS ALWAYS POSSIBLE TO GET A COMPETENT CONSULTANT TO PRODUCE A REPORT ON A SPECIFIC AREA OR SUBJECT, BUT THESE ALMOST INVARIABLY USE GSC DATA AS A BASE. SHOULD THE BASE MATERIAL BE REMOVED THEN THE USEFULNESS OF THE CONSULTANTS (OR IN-HOUSE) REPORT WILL BE GREATLY REDUCED. IT WOULD BE ALMOST IMPOSSIBLE TO DUPLICATE THE GSC CONTRIBUTION TO OUR DATA-BASE (WHAT A HORRIBLE WORD|)

0303 STAFF \$90,000 CONSULTANT SERVICES \$200,000.
COMMENT: GSC DOCUMENTS, ESPECIALLY THOSE CONCERNING REGIONAL MAPPING ARE VERY IMPORTANT TO MOST COMPANIES. THE COST OF GRASS ROOTS MAPPING IS VERY EXPENSIVE AND GENERALLY ONLY EFFECTIVE IN LIMITED AREAS. THE TYPE OF MAPPING SERVICES SUPPLIED BY GSC PROGRAMS ARE IMPORTANT IN LOCATING NEW AREAS OF FORMATIONS THAT MAY HAVE ECONOMIC POTENTIAL.

0307 STAFF \$X CONSULTANT SERVICES \$X
THE COST WOULD BE EXTREMELY DIFFICULT TO CALCULATE BECAUSE YOU WOULD HAVE TO DO ORIGINAL GEOLOGICAL MAPPING, ORIGINAL LAKE SEDIMENT SURVEYS ETC. WHICH THE SURVEY HAS DONE IN THE PAST. THESE SERVICES WOULD BE EXTREMELY EXPENSIVE FOR INDIVIDUAL COMPANIES TO DO BUT WOULD BE REQUIRED FOR EXPLORATION. THE GSC IS DOING AN INVALUABLE SERVICE AND IT WOULD BE IMPOSSIBLE TO PUT AN EXACT DOLLAR VALUE ON A REPLACEMENT.

0311 STAFF \$10,000 CONSULTANT SERVICES \$5,000.

0312 STAFF \$ CONSULTANT SERVICES \$X.

0314 STAFF \$ CONSULTANT SERVICES \$X.

0319 STAFF \$ CONSULTANT SERVICES \$X.
COMMENTS - CURRENT OPERATIONS PLACE DEMANDS UPON EXISTING MANPOWER SUCH THAT IT IS UNLIKELY THE INFORMATION SUPPLIED BY GSC DOCUMENTS WOULD BE REPLACED BY COMPANY STAFF BUT RATHER THERE WOULD BE AN INCREASE IN THE NUMBER OF GEOLOGICAL REPORTS PURCHASED FROM

CONSULTANTS DOING THIS TYPE OF WORK. THE COST OF THIS IS IMPOSSIBLE TO DETERMINE AT THIS POINT IN TIME.

0330 STAFF \$X CONSULTANT SERVICES X.

0332 STAFF \$X CONSULTANT SERVICES \$X.

COMMENTS: I USE AEROMAG AND AIRBORNE RADIOMETRICS AND GEOCHEMICAL DATA. THIS COULD BE CONTRACTED OUT BUT TO A SINGLE COMPANY THE COST WOULD BE PROHIBITIVE. SHARED BY ALL COMPANIES (I.E. VIA TAXES) THE COST IS MORE-THAN-REASONABLE. TO ESTIMATE THE COST IS IMPOSSIBLE BECAUSE FOR ANY ONE COMPANY THE WORK COULD NOT BE JUSTIFIED, IT WOULD INVOLVE HUNDREDS AND THOUSANDS OF DOLLARS.

0336 STAFF \$6,000.00 CONSULTANT SERVICES \$.

0340 STAFF \$X CONSULTANT SERVICES \$X.

COMMENTS: THE COST IS INDEFINABLE BECAUSE EACH YEAR'S WORK IS TOO VARIABLE IN ANCILLARY COMPONENTS, E.G. STRUCTURAL INTERPRETATION IN SEAGULL BATHOLITH AREA, OR AGE DETERMINATIONS OF VARIOUS SEDIMENTS ARE BEYOND OUR SCOPE AND ONLY NEEDED TO IMPROVE CONSISTENCY.

0341 IMPOSSIBLE TO ANSWER "OTHER SOURCES OR OTHER MEANS", COSTS WOULD BE SEVERAL HUNDRED THOUSAND DOLLARS SO WOULD NOT BE DONE OR CONSIDERED.

0345 STAFF \$ CONSULTANT SERVICES \$500,000.

COMMENT: GEOLOGICAL MAPS, STRATIGRAPHIC STUDIES AND DATA COMPILATIONS, BIOSTRATIGRAPHIC DETERMINATIONS, BASIN STUDIES, AEROMAG SURVEYS, AMONG OTHERS, WOULD BE NEARLY IMPOSSIBLE TO REPLACE.

0346 COMMENT: PROBABLY NOT REPLACE BECAUSE CLEARLY WE WOULD NOT DO THE WORK OF BIO/AGC. WE WOULD IN SOME CASES PROBABLY SELL MORE CONSULTANT SERVICES. I WOULD INCLUDE IN THIS THE NATURAL RESOURCE MAP (BATHYMETRY) SERIES OF CHS.

0353 STAFF \$600,000 CONSULTANT SERVICES

TO CARRY OUT MORE GEOLOGICAL RECONNAISSANCE FIELD WORK TO SUPPLEMENT DATA OF IMMEDIATE PROJECT AREA. WOULD REQUIRE ADDITIONAL MANPOWER.

0374 IN GENERAL IT WOULD BE ALMOST IMPOSSIBLE TO REPLACE THEM AS AN INDIVIDUAL.

0376 COMMENT: DIFFICULT TO ANSWER, PROBABLY CONSULTANTS AT A COST OF \$10,000 - \$20,000 BUT THIS IS JUST A GUESS - COULD GO HIGHER.

0381 AT THE MOMENT THERE IS NO REPLACEMENT FOR THE GSC OUTPUT THAT WE USE.

- 0402 COMMENT: CANNOT ESTIMATE BUT THE COST WOULD BE HIGH. ON THE OTHER HAND, OUR CLIENTS MIGHT BE FORCED TO GIVE US MORE WORK.
- 0403 STAFF \$25,000. CONSULTANT SERVICES \$.
- 0405 STAFF \$. CONSULTANT SERVICES \$VERY COSTLY.
- 0409 COMMENT: NOT QUALIFIED TO ANSWER REALLY.
- 0410 STAFF \$100,000 CONSULTANT SERVICES \$100,000
COMMENT: COST PER YEAR IS HARD TO ESTIMATE - DEPENDS ON TYPE OF SURVEY. COST OF LARGE SCALE GEOPHYSICAL OR GEOCHEMICAL SURVEYS OF THE TYPE UNDERTAKEN BY THE GSC WOULD BE PROHIBITIVE. GENERALLY, THE DATA PROVIDED BY THE GSC ENABLES ONE TO NARROW TARGETS AND TO RELY ON LESS DETAILED MAPPING (I.E. "RANDOM" GROUND CHECKS)
- 0411 COMMENT: OF THE G.S.C. PUBLICATIONS THAT ARE PRESENT I TEND TO USE THE CURRENT RESEARCH MORE FREQUENTLY AS A BASIC REFERENCE ON NEW MATERIAL COMING OUT OF A PARTICULAR AREA AND ALSO FOR THE REFERENCE LISTS FOR OTHER INFORMATION.
- 0412 COMMENT RE: C-9 - MAY I SUGGEST C. SPEND MORE MONEY ON MORE EXPENSIVE REFERENCE SOURCES, MANY MAY BE OUT OF MY REACH.
- 0415 STAFF \$. CONSULTANT SERVICES \$X.
COMMENT: COULD GO EITHER TO A OR B. HOWEVER FEEL THAT AT THIS POINT IN TIME, WE WOULD USE A CONSULTANT. SEE SECTION C-8 COMMENTS.
- 0418 STAFF \$ CONSULTANT SERVICES \$X
- 0423 STAFF \$. CONSULTANT SERVICES \$ MORE MONEY
- 0424 IMPOSSIBLE FOR ME TO JUDGE.
- 0431 STAFF \$20,000 CONSULTANT SERVICES \$50,000
COMMENT: ONCE AGAIN MONEY SPENT ON SALARIES OR CONSULTANTS WOULD MORE DIRECTLY BENEFIT THE LOCAL POPULUS RATHER THAN BE PASSED ON TO THE NATIONAL LEVEL. MOST PROGRAMS CAN BE HANDLED MORE EFFECTIVELY BY LOCAL WORKERS WHO REALIZE THE PROBLEMS AND SOLUTIONS MORE DIRECTLY.
- 0432 STAFF \$45,000 CONSULTANT SERVICES \$
COMMENT: THIS FIGURE OF \$45,000 WOULD BE AN APPROXIMATE YEARLY COST FOR 2 MEN TO MAP AREAS PRESENTLY COVERED BY THE G.S.C. THIS DOES NOT INCLUDE THE BUDGET FOR OFFICE AND FIELD OPERATION. AN ESTIMATED BUDGET FOR MAPPING AND STRATIGRAPHY WOULD BE ABOUT \$60,000 A YEAR.

- 0436 STAFF \$. CONSULTANT SERVICES \$2,000
COMMENT: I DOUBT THAT ANYONE CAN ANSWER THIS QUESTION ACCURATELY|
- 0438 STAFF \$MILLIONS. CONSULTANT SERVICES \$X
- 0443 COMMENT: C-9- IT WOULD NOT BE PRACTICAL TO REPLACE USE OF GSC MAPPINGS AND CURRENT RESEARCH.
- 0444 STAFF \$X CONSULTANT SERVICES \$
COMMENTS: C-9, WHILE MUCH OF THE DATA WE USE CAN BE REPLACED WE PROBABLY WOULD NOT REPLACE IT ALL SINCE THE COST WOULD BE PROHIBITIVE - E.G. REGIONAL GEOCHEMICAL SURVEYS.
- 0448 STAFF \$ CONSULTANT SERVICES \$X.
- 0450 STAFF \$. CONSULTANT SERVICES \$10,000
- 0454 STAFF \$ CONSULTANT \$10,000.00.
COMMENT: THE COST WOULD BE PROHIBITIVE FOR MOST INDIVIDUALS AND MANY SMALL COMPANIES.
- 0455 (C) GREATLY REDUCE EFFICIENCY.
COMMENT: BASIC GEOLOGICAL MAPPING IS NECESSARY FOR MANY FACETS OF INDUSTRY, ESPECIALLY MINERAL EXPLORATION. THIS MUST BE DONE BY QUALIFIED GEOLOGISTS AND IT MUST BE PUBLISHED TO PROVIDE A PERMANENT RECORD. THE FUNCTION OF MINERAL EXPLORATION IS TO FIND MINES; NOT MERELY TO PROVIDE PERMANENT RECORDS TO BE USED FOR ALL GEOLOGISTS. SUCH MAPPING CAN BE VERY EXPENSIVE SO THE RESULTS MUST BE WIDELY DISTRIBUTED. ONLY A GOVERNMENT SURVEY CAN BUILD THE QUALIFIED STAFF AND THE INTEGRATED GEOLOGICAL DISCIPLINES TO MAKE SUCH MAPPING EFFECTIVE. P.S. ANY IDIOT CAN COLLECT A SILT SAMPLE
- 0456 STAFF \$ CONSULTANT \$X.
- 0458 COMMENT: IN NO POSITION TO COMMENT.
- 0460 STAFF \$250,000. CONSULTANT SERVICES \$
- 0467 STAFF \$75,000. CONSULTANT SERVICES \$200,000
COMMENT: MINIMUM COSTS ASSUMING COMPLETE REPLACEMENT ON A COSTSHARED BASIS WITH OTHER INTERESTED COMPANIES.
- 0470 COMMENT: UNDER NO CIRCUMSTANCES WOULD I REPLACE THEM. I WOULD SIMPLY TURN TO OTHER VENTURES.
- 0474 COMMENT: NOT APPLICABLE.
- 0480 COMMENT: WOULD NOT BE IN A POSITION TO REPLACE.
- 0489 STAFF \$50,000 CONSULTANT SERVICES.

COMMENT: COST ESTIMATE IS FOR HIRING 1 MORE STAFF AS A SURFICIAL MAPPER-SALARY AND FIELD EXPENSES.

- 0491 STAFF \$7,000 CONSULTANT SERVICES \$
COMMENT: C-9 ADDITION OF 2 TO 3 PROFESSIONAL SUPPORT STAFF TO ASSIST WITH E.G. SERIES.
- 0495 STAFF \$10,000 CONSULTANT SERVICES \$.
- 0496 STAFF\$ CONSULTANT SERVICES \$X
- 0499 C-9: I WOULD SIMPLY DO WITHOUT IT. AS AN INDIVIDUAL I CANNOT EVEN CONSIDER A. OR B.
- 0505 HIRE MORE STAFF-\$50,000. CONSULTANT SERVICES-

SECTIONS C1 TO C9

- 0138 OFTEN CONSULTING SERVICES ARE USED DUE TO PROMPTNESS OF RECEIPT OF DATA IN SPECIFIC AREAS OF INTEREST WHICH GSC PERSONNEL MAY BE WORKING - CANNOT WAIT FOR DATA TO GO ON OPEN FILE. ALSO COMPILATION WORK BY GSC LESS APPLICABLE THEN DATA PRODUCED BY CONSULTANTS.

SECTION C

- 0287 COULD UTILIZE A LARGER LIBRARY OF GSC REPORTS, MAPS ETC. WITH AVAILABLE WORK AREAS.
- 0337 GEOLOGICAL MAPS ARE THE MOST IMPORTANT IRREPLACEABLE DOCUMENTS. ANY LARGE COLLECTION OF USEFUL DATA (I.E. GEOLOGICAL, AEROMAGNETIC, GEOCHEMICAL) AS OPPOSED TO USELESS DATA (I.E. RADIOMETRIC) CAN ONLY BE DUPLICATED AT HUGE COSTS.
- 0487 COMMENTS: NOT APPLICABLE.

SECTION D: COVERAGE, RELEVANCE, TIMELINESS, AND ACCURACY.

SECTION D1

- 0301 (C)(D) GSC MATERIAL ON SUBJECTS IN THESE TWO AREAS SEEMS TO BE SEVERAL YEARS "LATE" IN PUBLICATION. A GREAT PART OF THIS IS, I SUSPECT DUE TO THE LAG BETWEEN MANUSCRIPT AND PUBLICATION STAGES. HOWEVER, ONE WONDERS SOMETIMES IF THE GSC 'EXPERTS' OF A PARTICULAR AREA ARE AWARE OF THE REQUIREMENTS OF THE MORE ECONOMICALLY ORIENTATED INDUSTRY GEOLOGISTS. FOR EXAMPLE, THE LOWER TRIASSIC OF THE ARCTIC ISLANDS CONTAINS ALL THE MAJOR GAS RESERVOIRS OF THE AREA AND YET HAS NOT (TO MY KNOWLEDGE) RECEIVED MUCH ATTENTION FROM THE GSC. THE BELLY RIVER (JUDITH RIVER) OF THE PLAINS CONTAINS SOME VERY ATTRACTIVE RESERVOIRS, BUT THE 'INTEREST' OF THE GSC APPEARS CONFINED TO OUTCROP - DATA COLLECTED MANY YEARS AGO.
- 0332 (H)(J) NOT PERSONALLY FAMILIAR
- 0346 (E) VERY SLOW PUBLICATION BY AGC||
(J) HOWEVER NO MAIN INDICES OF DATA AVAILABLE.
COMMENTS: WHILE I AM SURE THAT THIS COMMENT CAN BE EASILY IDENTIFIED, IT MUST BE SAID AGAIN AND AGAIN THAT BIO DOES NOT IN AGC HAVE EITHER THE ABILITY OR MANPOWER OR THE WILL TO GET THEIR DATA OUT TO THE SCIENTIFIC PUBLIC AND HAVE USED. THUS THE OLD SYSTEM PREVAILS. THERE ARE NO COMPILED INDEX MAPS THE PUBLIC CAN BUY. THERE IS NOT A SYSTEM OF REVIEWING THE PUBLIC PROFILES/MAPS ON REQUEST - CONTRAST TO THE U.S. DEPOSITORY IN BOULDER OR MAPS ON REQUEST - CONTRAST TO THE U.S. DEPOSITORY IN BOULDER OR EVEN LAMENT/WITOI IN SCRIPPS. AS WELL IN CANADA WE ARE DOING LITTLE WORK ON MARINE GEOTECHNICAL QUESTIONS. I FIND THE GSC WORK (SINCE 1975) IN THE BEAUFORT SEA VERY SLOW TO REACH PUBLICATION. IN FACT MOST IS NOT YET OUT.
- 0412 COMMENT: D-1 C. LOW SCORES RESULT FROM MATERIAL LOCATING OUTCROPS AS MUCH AS 17 MILES AWAY FROM THIER REAL LOCATION, SLOW ACCEPTANCE OF NEW ADVANCES IN SEDIMENTOLOGY AND A NEED FOR MORE OUTCROP WORK TO BE DONE.
- 0424 (H) I HAVE SEEN VERY LITTLE PUBLISHED DATA ON DRILLING RECORDS FROM THE ST. LAWRENCE/SOUTH ONTARIO LOWLANDS REGION. WHAT IS AVAILABLE COMES FROM PROVINCIAL SURVEY AND INDUSTRY SOURCES.
- 0454 THERE IS IN MY OPINION NO LIMIT TO THE DURATION OF USEFULNESS. WE ARE STILL FINDING OBSERVATIONS MADE 100 YEARS AGO USEFUL. COMMENTS: THERE IS GENERALLY FAR TO LONG A PERIOD LAPSES BETWEEN COLLECTION AND PUBLICATION OF DATA AND MAPS. RESOURCE INVENTORY COULD BE UP-DATED

ANNUALLY WITH THE USE OF COMPUTER AND SHOULD INCLUDE PROVEN, PROBABLE AND GEOLOGICAL AND TECHNICALLY POSSIBLE.

0500 (I) WORK BY GSC REDUCED TO NEARLY NIL THESE RECENT YEARS.

SECTION D2

0006 MARGINAL SCORES FOR (A) AND (B) GIVEN BECAUSE OF LIMITED AMOUNT OF INFORMATION AVAILABLE IN FIELD OF INTEREST.

0087 (P) MAPPING - GEOLOGIC OR TOPOGRAPHIC? COMMENTS: THE ARRANGEMENT OF THE RESPONSES SOLICITED IN SECTION D DOES NOT PERMIT ADEQUATE IDENTIFICATION OF STRENGTHS AND WEAKNESSES OF THE GSC, NOR DOES IT PERMIT THE FIELD GEOLOGIST TO VOICE AN OPINION ON WHAT SHOULD BE DONE. MAPPING IN THE SHIELD IS EXCELLENT WHERE IT IS NEEDED. IT IS ABSENT OVER CRITICAL AREAS OF THE WEST. TOPOGRAPHIC MAPPING IS ALSO MISSING IN MUCH OF THE WEST ON A 1:50,000 SCALE. THE FRAMERS OF THIS SECTION SHOULD HAVE TALKED WITH THEIR FIELD GEOLOGISTS.

0214 I, IN MY CASE, REFERS TO MINERALOGICAL DATA.

0217 UNDER COLUMN "A", AN AMBIGUITY ARISES DEPENDING ON WHETHER EMPHASIS OF THE QUESTION IS TO BE GIVEN TO "HOW WELL MY NEEDS ARE SERVED" DUE TO THE OVERALL QUALITY ETC. OF GSC PUBLICATIONS, OR HOW WELL BY SURVEY DOCUMENTS AS OPPOSED TO ALL DOCUMENTS WHICH SERVE MY NEEDS. I HAVE ASSUMED THE LATTER. THEREFORE LOW SCORES INDICATE THERE ARE OTHER SOURCES SUCH AS PROVINCIAL REPORTS THAT FILL IN WHERE THE SURVEY IS NOT ACTIVE.

0223 (B) APPLIES ONLY TO AEROMAG DATA.
I THINK THE COMMON COMPLAINT THAT MANY GSC PERSONNEL TAKE TOO LONG TO PUBLISH IS VALID. CURRENT RESEARCH GETS AROUND THIS PARTLY BUT I THINK INDIVIDUAL FIELD GEOLOGISTS SHOULD BE ENCOURAGED TO FINISH EACH FIELD PROJECT AND HAVE IT AT LEAST CLOSE TO BEING WRITTEN UP BEFORE GOING BACK INTO THE FIELD OR A NEW ONE.

0265 COMMENT: REPORTS AND MAPS PUBLISHED LONG AFTER FIELD WORK, OR NOT AT ALL, IN SOME CASES. SOMETIMES APPARENTLY "CLASSIC LOCALITIES" OF COMMON PLACES IN ONTARIO AND QUEBEC SEEM LACKING IN DETAILED WORK.

0332 (F) NO PERSONAL GRIEVANCE.
COMMENT: D-2- DISCIPLINES--- COMPLETE AEROMAG COVERAGE IN B.C. WOULD BE OF GREAT USE|

- DISCIPLINES--- MAPPING IN B.C. NEEDS UPDATING AND A CONSISTENT OVERVIEW.

- 0371 SECTION P(I) - MOSTLY DONE BY THE PROVINCE IN THE AREAS THAT I AM INTERESTED IN.
- 0409 COMMENT: INSUFFICIENT USE TO SAY GENERALLY
- 0411 COMMENT: I USUALLY USE OTHER JOURNALS AND THUS HAVE NOT HAD THAT EXPERIENCE USING G.S.C. MATERIAL.
- 0412 D-2 N. RATES A LOW SCORE BECAUSE THERE IS A VERY STRONG TENDENCY TOWARDS ESTABLISHED DOGMA OVER NEW AND INNOVATIVE IDEAS.
- 0415 COMMENT: FROM A TIMBER HARVESTING VIEWPOINT SCALES OF 1:20,000 WOULD BE EXTREMELY DESIREABLE.
- 0420 COMMENT: MOST ITEMS RATED "3".
- 0422 COMMENTS: D-2-D) - ALTHOUGH PEOPLE ARE WORKING IN THE AREA ON "METALLOGENIC" D-2-E STUDIES (YUKON, NORTHERN B.C.) LITTLE CONCRETE MATERIAL IS PUBLISHED, ASIDE FROM A FEW SHORT NOTES IN CURRENT RESEARCH, OF VERY LIMITED USEFULNESS. "METALLOGENISTS" HAVE BECOME TOURISTS TRYING TO SEE EVERY DEPOSIT IN THE REGION RATHER THAN DIGGING THEIR HEELS INTO SOMETHING, STUDYING IT, AND PUBLISHING SOMETHING WORTHWHILE. (P) REGIONAL MAPPING MAY BE OUT OF DATE IN SOME AREAS, BUT THIS TYPE OF WORK IS NOT SOMETHING THAT CAN BE DONE WELL IN A RUSH OR BY CONTRACTING. TO MAINTAIN QUALITY IT MUST BE DONE BY GEOLOGISTS WITH YEARS OF EXPERIENCE IN THE REGION, WHO CAN MAKE THE BEST INTERPRETATIONS OF WHAT THEY SEE. SUPPORT FROM PALEONTOLOGICAL STANDARDS CORRELATION IS ESSENTIAL TO THIS WORK AND HAS BEEN TO ME, OF EXCELLENT QUALITY. (C) THERE SHOULD NOT BE PUBLICATION OF MASSES OF GEOCHEMICAL DATA WITHOUT SOME ATTEMPT AT SYNTHESIS OR INTERPRETATION||
- 0424 (K) SEEMS TO BE A CONSIDERABLE DELAY IN THE PUBLICATION OF SOME PALAEONTOLOGICAL MS'S. IT IS DIFFICULT TO JUDGE WHETHER THIS IS DUE TO ADMINISTRATION PROBLEMS OR AUTHOR HOLD-UPS.
- 0432 COMMENT: MY GREATEST CONCERN IS THE LENGTH OF TIME TAKEN BEFORE G.S.C. OUTPUT IS PUBLISHED. THIS APPLIES PARTICULARLY TO MAPS OF A RECONNAISSANCE NATURE (1:250,000). THE QUALITY OF MAPPING IS ACCEPTABLE FOR THE MOST PART, BUT THE LENGTH OF TIME DURING PUBLICATION IS TOO LONG - AS A CONSEQUENCE OUR NEEDS ARE NOT BEING SERVED PROPERLY.
- 0433 COMMENT: - ADMITTEDLY, COMMODITY INTERESTS RELATED TO GEOGRAPHIC AREAS ARE HIGHLY VARIABLE AND CHANGING

CONSTANTLY IN THE MINING EXPLORATION BUSINESS, HOWEVER, IT HAS BEEN FOUND THAT PROVINCIAL SURVEYS ARE MUCH QUICKER TO RESPOND TO THESE CHANGING INTERESTS BY PROVIDING USEFUL INFORMATION IN THE FORM OF REGIONAL GEOLOGICAL GEOCHEMICAL COMPILATION MAPS, DETAILED GEOLOGICAL MAPPING, OR RESEARCH RELATING TO SPECIFIC, CURRENTLY IMPORTANT PROBLEMS WHETHER DEALING WITH EXPLORATION TECHNIQUES OR ORE GENESIS MODELS|

- 0437 COMMENTS: I DID NOT FEEL PARTICULARLY QUALIFIED TO ANSWER THIS SECTION. THIS DISCIPLINE, AS OTHERS, LACKS SUFFICIENT DATA.
- 0438 COMMENT: THE QUESTION OF TIMELINESS IS IRRELEVANT TO WHAT THE G.S.C. SHOULD BE DOING. THE PRODUCTION OF BASIC DATA OF MAPS AND STRATIGRAPHY HAS TO BE DONE ON AN ORDERLY AND SEQUENTIAL BASIS. THE BREAKDOWN BY REGIONS IS NOT DETAILED ENOUGH. THERE ARE SOME AREAS WHERE EXCELLENT DATA ARE AVAILABLE RIGHT NOW, ADJACENT TO AREAS WHERE ONLY CRUDE REGIONAL MAPS ARE AVAILABLE. D-2P: THERE IS MUCH MORE WORK TO BE DONE AND THE LOW SCORES ARE NOT THE FAULT OF THE G.S.C. OFFICERS IN MOST CASES. EACH YEAR BRINGS IMPROVEMENTS AND NEW MAPS. THEREFORE THE REGIONAL SYNTHESSES HAVE TO BE CONTINUALLY UPDATED. AREAS THAT HAVE BEEN RECONNAISSANCE MAPPED, MUST BE RE-MAPPED COPY 10-20 YEARS, AS NEW DATA AND CONCEPTS BECOME AVAILABLE. THE CONTRAST IN INFORMATION ON SOME ADJACENT MAP STATS IS STARTLING. OPEN FILE RECONNAISSANCE MAPS AND COMPILATIONS ARE BY FAR THE MOST USEFUL SOURCE OF DATA - AND THE MOST COST-EFFICIENT FOR THE G.S.C. THE RIGOR AND THOUGHTFUL PREPARATION INVOLVED IN COLOURED MAPS IS ALSO JUSTIFIED.
- 0444 COMMENT: MAJOR PROBLEM FROM MY POINT OF VIEW AND NEEDS IS TARDINESS OF FORMAL OUTPUT, SUGGEST MORE EMPHASIS ON OPEN FILE DATA AND ON CURRENT RESEARCH. THERE IS OFTEN OVER MUCH DETAIL AND WE WOULD BE BETTER SERVED BY EARLY RELEASE OF MAIN DATA EVEN IF THIS RESULTS IN A SLIGHT DECREASE IN ACCURACY AND/OR RELIABILITY.
- 0455 COMMENT: P.(I.) - DETAILED MAPPING HAS NOT PROGRESSED AS MUCH AS IS DESIRABLE.
- 0457 COMMENT: DURATION - AFTER 10 TO 15 YEARS OBSOLESCENCE BECOMES SIGNIFICANT AS NEW MAPPING AND IDEAS OR TECHNIQUES ARE ADOPTED. MAPPING STUDIES AND IDEAS SURFACE FASTER THAN LAB DATA, DESCRIPTIONS, INTERPRETATIONS BECAUSE OF PRIORITY GIVEN, OPEN FILE AND CURRENT RESEARCH PUBLICATIONS.
- 0458 COMMENT: FIND MAPS OF VARIOUS SCALES AND DESCRIPTIONS OF MINERAL OCCURRENCES MOST USEFUL.
- 0460 COMMENT: D-2-E/M - INCEPTION - PUBLICATION PERIOD TOO

LONG PUBLICATION DELAYS/REPORTING DELAYS. D-2-M/1 - PETROLOGICAL STUDIES NEED TO HAVE MORE ECONOMIC/ APPLIED SLANT D-2-P/2 - INCEPTION - PUBLICATION PERIOD TOO LONG.

- 0467 COMMENT: URANIUM IS A FAST-GROWING SUBJECT AND NEEDS FREQUENT UP-DATING OF INFORMATION AND SYNTHESSES.
- 0470 COMMENT: MOST OF MY WORK OVER 30+ YEARS HAS BEEN DONE WHERE GSC HAD ONLY WORKED SUPERFICIALLY; LATER BEING FOLLOWED BY GSC DETAIL, WHEN I NO LONGER NEEDED IT. THUS, MY PREVIOUS COMMENT THAT SOME LEADERSHIP IN EXTRACTIVE TECHNOLOGY (SOLID, LIQUID, AND GAS "MINERALS") WOULD NOW BE TIMELY.
- 0479 COMMENTS: OUR REQUIREMENTS FOR TECHNICAL INFORMATION HAVE BEEN WELL SERVED BY THE HIGHLY COMPETENT TECHNICAL AND SCIENTIFIC STAFF. WE TRUST PRESENT ADMINISTRATION RECOGNIZES THEIR PREVIOUS COMPETENCE AND IS NOT PLANNING CHANGES.
- 0480 COMMENT: QUATERNARY STUDIES IN HUDSON BAY LOWLAND LIMITED TO EXTREME SOUTHERN PORTION.
-BEDROCK GEOLOGY FOR H.B.L. WELL STUDIED AND MAPPED 1:500,000 TO 1:1,000,000
-WILL BE USING MAP OF BEDROCK SENSITIVITIES TO ACID RAIN WHICH IS ABOUT TO BE PUBLISHED BY G.S.C.
-MUCH OF THE INFORMATION WE USE IN ONTARIO, ESPECIALLY SOUTH OF THE LOWLAND, AND IN A REGIONAL SENSE IS DERIVED FROM THE PROVINCE O.G.S./O.M.N.R.
- 0491 COMMENT: GENERALLY MY DATA REQUIREMENTS ARE WELL MET BY G.S.C. PUBLICATIONS AND GSC INFORMATION SOURCES, BUT THERE IS A NEED FOR A BETTER INDEX TO WHAT HAS BEEN PUBLISHED, FROM 1840'S TO PRESENT. THIS COULD HANDLED ON A CONTRACT BASIS BY SUITABLE EXPERIENCED PERSONS.
- 0495 COMMENT: D-2 1: PROPERTIES OF GEOLOGICAL MATERIALS: POOR FOR SURFICIAL DEPOSIT: NO PHYSICAL PROPERTIES JUST A DESCRIPTION.
- 0499 COMMENT: D-2 A. -VERY LITTLE IS PUBLISHED IN MY FIELD OF INTERESTS (ENGINEERING GEOLOGY). PUBLICATIONS ARE FEW AND COME OUT AT IRREGULAR INTERVALS. HOWEVER WHAT IS PUBLISHED IS USUALLY EXCELLENT.
- 0500 (P) SYNTHESSES ACHIEVED BY UNIVERSITY OR PROVINCIAL GOVERNMENT SURVEYS. N.G. MEMORIAL UNIVERSITY SYNTHESIS OF APPALACHIAN GEOLOGY 1978.

SECTION D

- 0011 WISH THAT MORE CARE WAS TAKEN IN PRODUCING 1:250,000 MAPS. THEY ARE GOOD CONSIDERING THE TIME THAT IS SPENT ON THEM BUT I BELIEVE THAT MORE FIELD WORK SHOULD BE ALLOCATED BEFORE MAPS ARE COMPILED AND MORE CARE SHOULD BE TAKEN IN SELECTING PERSONNEL TO DO THE FIELD WORK IN CERTAIN AREAS. FOR EXAMPLE, FIELD WORK IN MOUNTAINOUS, GLACIATED AREAS SHOULD BE DONE BY PEOPLE QUALIFIED AND EXPERIENCED TO MOVE IN THIS TYPE OF TERRAIN RATHER, THAN BY PEOPLE WHO MIGHT BE RESTRICTED IN THEIR ABILITY TO EXAMINE OUTCROPS. THE LATTER WOULD THEN TEND TO PRODUCE LOWER QUALITY WORK.
- 0012 GSC PUBLICATIONS ARE WELL APPRECIATED IN GENERAL. MOST OF THE INFORMATION RELEASED IS OF ACADEMIC INTEREST WITH SOME POTENTIAL ECONOMIC VALUE.
- 0035 NOTE: THE GSC HAS LARGELY BEEN SUPPLANTED THROUGHOUT MOST OF CANADA BY PROVINCIAL SURVEYS AND IS THEREFORE NOW RESPONSIBLE FOR ONLY PART OF THE GLOBAL OUTPUT OF DATA CONCERNING THE GEOLOGY OF CANADA. THE LOW SCORES HERE REFLECT THIS FACT.
- 0040 I DO NOT FEEL QUALIFIED DUE TO FREQUENCY OF USE TO GIVE YOU ANY INTELLIGENT ANSWERS TO D.
- 0050 IN VIEW OF THE INCREASED ROLE OF DREE, FUNDING REFERRED TO AT THE END OF SECTION C IT IS IMPOSSIBLE FOR ME TO COMMENT OBJECTIVELY ON SECTION D OR TO INDICATE HOW WELL OUR NEEDS HAVE BEEN SERVED BY THE GSC COMPONENT OF OUTPUT, ETC.
- 0065 COMMENT: PUBLICATIONS INVOLVING ORE DEPOSITS IN GENERAL, THE DESCRIPTIONS OF THE GEOLOGICAL SETTING, AND MINERALIZATION TYPE ARE GOOD. HOWEVER, DATA ON THE SIZE OF THE DEPOSIT DIMENSIONS-TONNAGE ARE EITHER OMITTED OR NOT QUALIFIED. THE POTENTIAL OF A PROPERTY IS IMPORTANT TO THOSE WHO ARE TRYING TO EVALUATE UNDEVELOPED DEPOSITS ACROSS THE COUNTRY.
- 0088 MORE RAPID PUBLICATION IS DESIRABLE IN SOME AREAS. THE QUALITY OF PUBLICATIONS DEPEND ON THE INDIVIDUALS INVOLVED SO IS HIGHLY VARIABLE. I WOULD LIKE TO SEE GREATER USE MADE BY GSC OF REFEREED JOURNALS SUCH AS CJES FOR TOPICS OF MORE THAN AVERAGE GENERAL INTEREST AND FOR CONCISE REGIONAL SYNTHESSES AND INTERPRETATIONS.
- 0091 GEOCHEMICAL SURVEYS ARE TOO SPORADIC, NON SYSTEMATIC. PRECAMBRIAN STUDIES FAR TOO LIMITED. LEADERSHIP MOSTLY IN UNIVERSITIES OR PROVINCIAL SURVEYS. PUBLICATION HORRIBLY SLOW. COLLABORATION ONLY JUST BEGINNING TO PICK UP. RADIOMETRIC DATING LAB OUT OF DATE. PETROLOGICAL STUDIES ON MUCH TOO SMALL A SCALE. FAR TOO FEW DETAILED

MAPS PUBLISHED. MANY REGIONAL MAPS ARE NOW DATED REVISION RATE TOO LOW.

- 0092 IDEAS ON REGIONAL SYNTHESIS AND TECTONICS ARE STILL DEVELOPING, SO ANY PUBLICATION IS DATED.
- 0106 THE WESTERN CORDILLERA REQUIRES MUCH MORE MAPPING THAN IS PRESENTLY BEING CARRIED OUT. MORE DETAILED MAPPING SHOULD BE CORRELATED WITH THE B.C. DEPT. OF MINES MAPPING PROJECTS TO CONTINUALLY UPDATE GEOLOGICAL MAPPING IN THE WESTERN CORDILLERA. WHEN NEW ECONOMIC MINERAL DISCOVERIES ARE MADE, GSC OR PROVINCIAL GOVERNMENT MAPPING PROGRAMS SHOULD BE LAUNCHED INTO THE REGION TO CONDUCT 1:50,000 OR 1:25,000 MAPPING PROJECTS.
- 0127 SINCE THE GSC HAS STOPPED MAPPING THE GAP IN BASIC QUADRANGLE MAPPING IN N.S. HAS WIDENED. THE SOLUTION IS THE GSC TO RESUME MAPPING OR THE PROVINCE TO BE PUSHED INTO A PROGRAM OF THEIR OWN.
- 0129 EVERYONE WILL PROBABLY INDICATE THAT THEY WANT MORE DIVERSIFIED AND MORE DETAILED STUDIES FOR THEIR AREAS OF INTEREST. YUKON HAS A NUMBER OF AREAS WHERE BASIC GEOLOGIC MAPPING IS A) NOT YET AVAILABLE, B) OVER 50 YEARS OLD C) OUT OF PRINT (AT 1:250,000). THESE AREAS OF BASIC GEOLOGIC WORK WOULD BE THE WORK OF FIRST PRIORITY. MORE DETAILED EXAMINATION AND INTERPRETATIONS COULD FOLLOW.
- 0133 THOSE WITHOUT SCORES ARE DUE TO LACK OF KNOWLEDGE ON THEM.
- 0138 THOSE DISCIPLINES MISSING ARE NOT USED AND CANNOT BE COMMENTED ON.
- 0171 RESOURCE SURVEYS RAPIDLY AGE. RADIOMETRIC DATING SUFFERS FROM CHANGES IN ASSUMPTIONS AND TECHNOLOGIES THAT IS, THE AGES CHANGE.
- 0188 GREAT NEED TO SPEED UP PUBLICATION OF DATA EVEN AT SOME SACRIFICE TO HIGH GSC STANDARDS.
- 0190 PERHAPS NOT AGGRESSIVE ENOUGH - INSUFFICIENT RESOURCES? - TO STUDY OIL POTENTIAL OF NEGLECTED BASINS - E.G., IN B.C.
- 0191 LOW SCORES FOR D-1G D-2P BECAUSE GSC NO LONGER AS ACTIVE IN THIS AREA AS BEFORE; OGS PROVIDES SERVICES INSTEAD.
- 0194 POOR SCORES ARE RELATED TO FAST MOVING SUBDISCIPLINES WHILE THE QUALITY OF PUBLICATION MAY BE ADEQUATE, THE AMOUNT IS DECLINING. MAYBE, ACTIVE RESEARCHERS ARE SPENDING TO MUCH TIME SECONDED TO UNPRODUCTIVE COMMITTEES. ALTERNATIVELY, THE GRADUAL AGING OF

EQUIPMENT MAY BE A CONTRIBUTING FACTOR. THE GSC HAS GOOD WET CHEMISTRY, BUT NOT OUTSTANDING ELECTRONIC IN DOCUMENTATION. I CAN'T THINK FOR THAT MATTER OF A SINGLE GSC LAB THAT STILL HOLDS ITS PLACE AMONG LEADING LABS ON A WORLD SCALE.

- 0195 NEW BRUNSWICK AND ADJOINING REGIONS INADEQUATELY COVERED BY GSC BEDROCK MAPS AND REPORTS.
- 0202 THE TIME NECESSARY TO PUBLISH MOST OF ITS PUBLICATIONS IS TOO LONG. IT IS A DISGRACE. THE INFORMATION IS OFTEN OUT OF DATE WHEN IT COMES OUT. VERY LITTLE INFORMATION IS AVAILABLE ON NON-METALLIC MINERAL RESOURCES THROUGH THE GSC.
- 0204 THERE IS A PRETTY FINE LINE BETWEEN DATA APPROPRIATE FOR PUBLICATION BY THE GSC AND THAT SHOULD BE HANDLED BY "PRIVATE ENTERPRISE". FOR EXAMPLE GEOLOGIC MAPS ARE OF INTEREST FOR THEIR SCIENTIFIC CONTENT ALONE, AND THEREFORE APPROPRIATE TO GSC. BUT I HAVE SEVERE RESERVATIONS ABOUT THE REGIONAL GEOCHEM PROGRAMS AND AIRBORNE RADIOMETRICS - SURE THEY ARE USEFUL, AND I MAKE USE OF THEM, BUT I HAVE GREAT RESERVATIONS ABOUT WHETHER THIS SHOULD BE PART OF THE GSC FIELD OF ACTIVITY. THE SAME HOLDS TRUE WITH THE MINERAL DEPOSITS GROUP - THE PEOPLE ARE EXCELLENT; I MAKE USE OF THEIR REPORTS AND ADVICE - BUT IS IT TRULY APPROPRIATE FOR THE GSC TO RUN AROUND LOOKING AT AND APPRAISING MINING PROPERTIES? SINCE BUREAUCRACIES ALWAYS EXPAND, I SEE THIS AS A FIRST STEP TO A NATIONAL MINERAL EXPLORATION COMPANY.
- 0224 HOW I WOULD LIKE TO BECOME A PART OF STUDIES IN ONE OF THESE REGIONS|
- 0230 MY MAPPING NEEDS ARE BETTER MET BY PROVINCIAL SURVEYS.
- 0233 WITH DUE RESPECT - SECTION D CHOICES HAVE SOME IMPLICIT ASSUMPTIONS THAT MAKE IT DIFFICULT FOR ME TO GIVE "GOOD" ANSWERS. IF A FORMAL OUTPUT EXISTS MY NEEDS FOR BACKGROUND, GENERAL OVERVIEWS ARE WELL SERVED. IF A REPORT EXISTS IT IS TIMELY. IF NOT - I DO WITHOUT AS CLIENTS CAN'T WAIT FOR THE GOVERNMENT TO PRODUCE.
- 0258 PUBLICATION OF GSC MEMOIRS, BULLETINS, AND PAPERS COULD BE SPEEDED UP BY MORE EDITORIAL STAFF, DRAFTING AND REPRODUCTION. THIS IS ONE FEATURE OF GSC THAT REQUIRES ATTENTION MAINLY BECAUSE OF UNDERSTAFFING.
- 0287 MOST MARGINAL SCORES RELATE TO TIMELINESS WHICH UNDERSTANDABLY IS DIFFICULT TO FORECAST.
- 0294 FIELD-CHECKING FREQUENTLY DIFFERENT FROM REPORTED ROCK TYPES; FOR EXAMPLE, - AURIFEROUS. "MARBLE" DYKES ARE BARREN QUARTZ ALBITITE DYKES. THUS I QUESTION THE

SOURCES OF INFORMATION ON SOME OF THE OPEN FILE REPORTS. ALSO, DOTTED OUTCROP OUTLINES ON SUCH PRELIMINARY MAPS ARE EXTREMELY DIFFICULT TO "READ" AND THEREFORE TIRING OR DEFEATING TO USE, EVEN IF THE DATA ARE VALID.

- 0303 I FIND THAT FORMAL DOCUMENTS ON SHIELD GEOLOGY IN THE ARCTIC ARE SCARCE AND USUALLY RATHER DATED. OFTEN NEW STUDIES PUBLISHED LAG BEHIND INDUSTRY ACTIVITY IN AN AREA. GEOPHYSICAL STUDIES ARE LACKING IN MANY PARTS OF THE SHIELD AND CORDILLERA. METALLOGENIC STUDIES AND MINERAL RESOURCE SURVEYS USUALLY ARE OF LIMITED SCOPE AND ARE QUICKLY OUTDATED BY NEW DEVELOPMENTS. MORE RADIOMETRIC DATING WOULD BE USEFUL IN THE CORDILLERA. MORE DETAILED MAPPING SHOULD BE UNDERTAKEN ESPECIALLY AROUND MINERAL DEPOSITS AND SHOULD BE ACCOMPANIED BY RESEARCH ON ORE GENESIS OF THE DEPOSITS IN THE MAP AREA.
- 0310 IT IS DIFFICULT TO GIVE ANSWERS TO THESE QUESTIONS BECAUSE NEEDS CHANGE. SOMETIMES INFORMATION NEEDED IS NOT YET AVAILABLE SUCH AS AEROMAGNETIC DATA OVER PARTS OF BRITISH COLUMBIA, IN OTHER CASES THE PUBLICATIONS ARE AVAILABLE AND SERVE THE NEEDS EXCELLENTLY. THE ANSWERS GIVEN ABOVE THEREFORE TEND TO BE AVERAGES. THE DURATION OF USEFULNESS TENDS TO BE VARIABLE. I SOMETIMES CONSULT PUBLICATIONS 40 YEARS + OLD AND FIND THEM USEFUL, PARTICULARLY OLDER GEOLOGICAL MEMOIRS. IT IS ALSO DIFFICULT TO ANSWER WELL THE QUESTIONS REGARDING MATERIAL USED INFREQUENTLY.
- 0319 DURATION OF USEFULNESS OF GSC FORMAL OUTPUT IS A VARIABLE FACTOR. SOME OF THE ORIGINAL MAPPING IN THE ALBERTA FOOTHILLS (SURFACE GEOLOGICAL MAPPING) DONE IN THE EARLY DAYS OF THE GSC STILL IS AS GOOD AS ANY MAPS AVAILABLE BUT THE CROSS-SECTIONS MAY BE OUTDATED BY MORE RECENT WELL DATA.
- 0320 ANY ECONOMIC TOPIC APPEARS TO BE TREATED AS AN AFTERTHOUGHT IN PUBLICATIONS THAT DEAL WITH THE SEDIMENTOLOGY/STRUCTURE OF PRODUCING OR POTENTIAL SEDIMENTARY BASINS. THE ACADEMIC APPROACH IS QUITE ACCEPTABLE TO ME, HOWEVER, A SINCERE ATTEMPT TO APPLY THE RESULTS TO A "REAL-WORLD" DILEMMA WOULD BE GREATLY APPRECIATED.
- 0330 COMMENTS: SOME AREAS APPEAR TO BE OVERLOOKED FOR LONG PERIODS OF TIME WHILE OTHERS RECEIVE MORE ATTENTION THAN THEY PROBABLY DESERVE - POSSIBLY BECAUSE OF PERSONAL PREFERENCES ON THE PART OF GSC STAFF.
- 0336 COMMENTS: SOME OF THE GEOCHEMICAL ISSUES WOULD BE MORE USEFUL EARLIER IN THE SEASON.
- 0337 I FIND IT DIFFICULT TO PUT NUMBERS ON THESE BOXES, SINCE ANY NUMBER MUST NECESSARILY BE AN AVERAGE JUDGEMENT OF

ALL GSC DOCUMENTS BACK TO 1800'S. E.G. MY ESTIMATION OF ACCURACY AND RELIABILITY MAY BE STRONGLY INFLUENCED DOWNWARD BY A FEW CASES (USUALLY COSTLY) MISADVENTURES AT FOLLOW-UP ON MY PART) OF INACCURACY AND DOWN-RIGHT MISTAKES WHICH ARE NOT TRULY A REFLECTION OF OVERALL GSC QUALITY. AS FAR AS TIMELINESS -- I ALMOST ALWAYS NEEDED IT 5 YEARS AGO.

- 0340 COMMENTS: H. TURN AROUND IS HORRID. K. FACTS ARE BURIED IN ALMOST INDECIPHERABLE TECHNICAL JARGON. THERE IS NO PLACE TO GET A CLEAR UNCOMPLICATED LIST OF DATES BY FOSSIL WORK IN ANY SPECIFIC AREA. TOO MUCH RESEARCH IS REQUIRED FOR A SMALL AMOUNT OF DATA. I.E. THE GSC EXPENDITURE ON URP AND URANIUM INVENTORY ARE A WASTE OF EXCELLENT PEOPLE ON GARBAGE PROGRAMMES (THE WHIM OF THE DAY). THE OLD ORDER OF CONSISTENT PROGRESS ON ALL LEVELS OF WORK IS SORELY MISSED|
- 0345 COMMENTS: THE GSC HAS ALWAYS BEEN WEAK IN THE FIELD OF PETROLEUM GEOLOGY, ESPECIALLY IN WESTERN CANADA. DESPITE THE EXISTENCE OF THE ISPG, THERE ARE GREAT VACUUMS IN APPLIED AND THEORETICAL RESEARCH IN THE AREAS OF, FOR EXAMPLE, SOURCE-ROCK ANALYSIS/ DETERMINATIONS, ORGANIC MATURATION, POTENTIAL OF PROTEROZOIC ROCKS, SCIENTIFIC DRILL-HOLES IN KEY TECTONIC/ SEDIMENTARY ENVIRONMENTS, POROSITY DEVELOPMENTS, PALEOGEOMORPHOLOGY AND THE NAUTRE/ DEVELOPMENT OF UNCONFORMABLE SURFACES, OIL SHALES, PETROLEUM FROM COAL, BASEMENT FRACTURES AND INFLUENCE ON HC ENTRAPMENT, LANDSAT (LINEAMENT ANALYSIS, POOL SIZE DISTRIBUTIONS AND TREND ANALYSIS, AND REGIONAL STRATIGRAPHIC MAPPING.
- 0353 COMMENTS: THE BEDROCK AND SURFICIAL GEOLOGY SERIES ARE NOT SPECIFIC ENOUGH FOR ENGINEERING GEOLOGICAL EVALUATION AND ARE ONLY USEFUL FOR A REFERENCE GUIDE. SHOULD HAVE MORE EMPHASIS ON STRUCTURAL DETAILS.
- 0376 GEOCHEM STUDIES HAVE TOO MUCH EMPHASIS ON URANIUM. WITH GEOLOGY I LIKE TO GO BACK AS FAR AS POSSIBLE. METAL MINERAL RESOURCES GENERALLY BEHIND INDUSTRY IN TIMELINESS. WOULD USE RADIOMETRIC DATING IF AVAILABLE. I FEEL PALEOMAGNETIC CORRELATION HAS POTENTIAL IN STRUCTURE AND ORE DEPOSIT STUDIES. A LOT MORE USE COULD BE MADE OF PETROLOGICAL WORK. WOULD LIKE TO SEE CO-ORDINATION WITH INDUSTRY ON WHERE TO DO DETAILED MAPPING I.E. HIT ACTIVE AREAS, NOT MOOSE PASTURES.
- 0377 MARGINAL SCORES INDICATE THAT THE GSC DOESN'T DO MUCH WORK IN MY AREA OF INTEREST - WHERE GSC PROJECTS DO OVERLAP WITH OUR OWN, THEY MAY VARY CONSIDERABLY IN ALL OF THE ABOVE CHARACTERISTICS AND IT IS DIFFICULT TO JUDGE THEM ALL UNDER ONE HEADING. IN GENERAL I WOULD SAY THE BEST GSC WORK IN THIS REGION IS DONE BY LOCAL GEOLOGISTS (I.E. MUN PROFESSORS) WORKING UNDER GSC

RESEARCH GRANTS.

- 0378 DETAILED MAPPING NOT ALWAYS AVAILABLE FOR OUR AREAS OF INTEREST.
- 0379 MORE DETAILED AND FREQUENT APPRAISAL OF MINERAL RESOURCES WOULD BE USEFUL.
- 0381 IT SEEM TO TAKE FOREVER TO GET A FORMAL REPORT OR MAP AFTER THE STUDIES HAVE BEEN DESCRIBED IN THE REPORTS OF ACTIVITIES.
- 0423 HAVE CONSIDERABLE CONCERN ON SIGNIFICANCE, DIRECTION AND COMPETENCE OF THE SURVEY WITH REGARD OIL AND GAS RESOURCE ESTIMATES AND HOW THEY ARE USED BY GOVERNMENT.
- 0452 I AM NOT CLEAR ON YOUR DEFINITION OF "DURATION OF USEFULNESS". MY SCORING IS BASED ON THE AGE OF INFORMATION THAT IS USEFUL TO ME IN THE WORK I AM APPLYING THE INFORMATION TO. MUCH OF MY WORK REQUIRES THE MOST RECENT THEORY AND/OR DATA. I SELDOM NEED "HISTORICAL" DATA.
- 0481 THERE IS A NEED FOR MORE GEOCHEMICAL DATA, PARTICULARLY THE CONTENT AND DISTRIBUTION OF HEAVY METALS IN BOTH BEDROCK AND GLACIAL DEPOSITS.
- 0489 SOIL SURVEY DOES NOT INVOLVE MANY OF D-2 USES.

SECTION E: FORMAT OF PUBLICATIONS.

SECTION E1

- 0012 EXCELLENT PUBLICATION FOR GENERAL REFERENCES, THE MEMOIRS SHOULD BE MORE WIDELY EDITED IN BOTH OFFICIAL LANGUAGES AND THE SAME FOR SOME SPECIFIC BULLETINS.
- 0040 AS A LOW FREQUENCY USER FOR OFTEN ONLY GENERAL PURPOSES I FIND IT DIFFICULT TO RATE THE ABOVE IN TERMS OF APPROPRIATE FOR MY USE.
- 0087 (B) GSC ALSO MAKES TOPOGRAPHIC MAPS, AND THESE ARE ALSO WIDELY USED.
- 0088 (A) THERE ARE TOO MANY PUBLICATION TYPES OR SERIES.
- 0106 (A) MORE EMPHASIS IS REQUIRED ON THE ECONOMIC IMPLICATIONS IN GSC PUBLICATIONS.
(B) AS STATED BEFORE, MORE 1:50,000 GEOLOGICAL MAPPING IS NECESSARY IN THE WESTERN CORDILLERA.
- 0129 (B) MOST NEW GEOLOGY MAPS ARE PRESENTED AS OPEN FILES. IT WOULD BE GOOD TO SEE MAPS REACH FINAL PRESENTATION STAGE, FOR PUBLICATION AS COLOURED SHEETS SOONER THAN IS THE CASE AT PRESENT.
- 0171 (A) CURRENT RESEARCH IS A BIT BIG.
- 0186 (A) FORMAT OF PUBLICATIONS IS GOOD - PROBLEM IS DELAY IN PUBLICATION. IN THIS LATTER RESPECT CURRENT RESEARCH IS VERY GOOD.
- 0190 (B) OK WITH ME.
- 0195 (B) 1:50,000 BEDROCK GEOLOGY GSC MAP COVERAGE INCOMPLETE. 1:250,000, 1:1,000,000 BEDROCK GEOLOGY GSC MAP COVERAGE NIL?
- 0202 A GOOD DEAL OF THE INFORMATION IN THE CURRENT RESEARCH IS OLD OR NOT RELEVANT AND GENERALLY INCOMPLETE. THESE MAPS (GEOCHEMISTRY) ARE NOT REALLY USEFUL BECAUSE THEY RARELY ADD ON OTHER PARAMETERS TO THE AVAILABLE INFORMATION.
- 0204 (A) I FEEL THAT IT IS IMPORTANT THAT GSC PUBLICATIONS ESTABLISH THE MEASURE OF ACCEPTABLE SCIENTIFIC WRITING IN CANADA.
(B) THERE SEEMS TO BE A VERY GREAT DELAY BETWEEN COMPLETION OF A FIELD PROGRAM AND PUBLICATION OF THE COLOURED, PUBLISHED GEOLOGIC MAP. WHAT IS THE HOLD-UP HERE?
- 0217 (A) ECONOMIC GEOLOGY SERIES PRESENTS A GOOD REGIONAL

GEOLOGY BACKGROUND, BUT NEEDS A MORE THOROUGH ORE DEPOSIT DESCRIPTION INCLUDING GENETIC CONCEPTS.

- 0224 (A) I DON'T RECALL USING THESE. I WOULD LIKE TO HAVE THE CHANCE TO PRODUCE SOME OF THESE.
(B) I HAVE LOOKED AT THESE OUT OF CURIOSITY AND TO USE AS GUIDES FOR TRIPS ON THE HIGHWAY.
- 0235 (B) GENERALLY FIND FORMAT OF MAPS DIFFICULT TO READ EASILY. COMBINATION OF TOPOGRAPHIC CONTOURS AND GEOLOGICAL INFORMATION ETC. IN SAME COLOUR NOT APPROPRIATE FOR EASY ASSIMILATION OF DATA.
- 0257 COMMENT: I AM CRITICAL OF THE G.S.C. FOR THE INCORRECT USE OF DATE OF PUBLICATION. THE DATE SHOULD BE THAT WHICH THE PRINTED MATERIAL IS ACTUALLY AVAILABLE TO THE PUBLIC. ANY EARLIER DATE IS FALSE AND MISLEADING IN THE BIBLIOGRAPHICAL SENSE.
- 0287 (B) LOCATION OF OUTCROP AND STRUCTURAL DATA MOST IMPORTANT.
- 0293 (A) GENERALLY SATISFACTORY.
(B) GENERALLY SATISFACTORY.
- 0303 THE ECONOMIC GEOLOGY SERIES IS SET UP IN SUCH A WAY THAT NEW DEVELOPMENTS IN DEPOSIT TYPES ARE UNABLE TO BE PUBLISHED QUICKLY AND ONCE A REPORT HAS BEEN MADE NEW DEVELOPMENTS CANNOT BE INCORPORATED. NEW DEVELOPMENTS ARE PUBLISHED IN CURRENT RESEARCH BUT LACK CONTINUITY TO PARTICULAR DEPOSIT TYPES OR MINING AREAS AND ARE OFTEN REDUNDANT. ONE SUGGESTION IS TO PUBLISH INFORMATION IN LOOSE-LEAF FORMAT SO CRITICAL PAGES MAY BE REPLACED WITH UPDATED MATERIAL AND NEW SECTIONS MAY EASILY BE ADDED.
- 0307 (B) I HAVE ONLY MARKED THE ONES I USE REGULARLY.
- 0319 (A) CURRENT RESEARCH AND ECONOMIC GEOLOGY SERIES ARE NOT USED SO THEY ARE NOT EVALUATED.
(B) APART FROM BEDROCK GEOLOGY I HAVE LITTLE NEED FOR MOST OF THE ABOVE MAPS.
- 0330 MAPS IN CURRENT RESEARCH COULD USE MORE TOPOGRAPHIC CONTROL.
- 0331 MANY USEFUL MEMOIRS, BULLETINS, ETC., GO OUT OF PRINT WHEN THEY ARE STILL VERY VALUABLE.
- 0340 THE GLOSS AND FANCY PAPER SEEM OUT OF PLACE FOR THE ROUGH AND HARD WORK (CURRENT RESEARCH); WHAT IS THE UNIT COST OF THIS ITEM? COMMENT: THE FANCY STATISTICS IS AN ABSURD WASTE OF MONEY; FOR THESE PEOPLE, WHO CANNOT RECOGNIZE WHAT IS ANOMALOUS, LET THEM BUY THE FANCY EDITIONS. THE RAW DATA IS MORE IMPORTANT THAN ANY OTHER

AVAILABLE ITEM.

- 0345 PUBLICATION DELAY IS MUCH TOO LONG IN GSC. SEVERAL YEARS DELAY ON BULLETINS AND MEMOIRS ARE NOT UNUSUAL. STREAMLINING OF EDITING/ PUBLICATION PROCEDURE WOULD BE MORE SATISFACTORY TO BOTH RECEIVERS AND OFFICERS OF SURVEY. HIGH PRODUCTION STANDARDS IN MAP PRODUCTION SHOULD BE MAINTAINED--A MATTER OF PRIDE TO ALL CANADIAN GEOLOGISTS.
- 0346 I HAVE SUGGESTED PREVIOUSLY TO NO AVAIL A YEARLY FEE ON SUBSCRIPTIONS TO JUST "CURRENT RESEARCH" SO ONE SIMPLY GETS THIS AS BOTH A LIST OF WHAT IS GOING ON BY WHOM. I WOULD INCLUDE IN SUBSCRIPTION THE YEARLY LIST OF GSC PUBLICATIONS AND OTHER PAPERS BY GSC PEOPLE. COMMENT: SLOW TO GET OUT IN PUBLISHED FORM OFTEN -- THOUGH NOW WITH SHIPS TIME CUT-BACK IT MAY GET ALL CAUGHT UP. ALSO THE GAP BETWEEN ONSHORE AND OFFSHORE MAY PERSIST IN MANY PLACES.
- 0376 CURRENT RESEARCH TENDS TO BE TOO BRIEF AND ON THE SPARSE SIDE SAME PROBLEMS WITH ECONOMIC GEOLOGY. MORE JOINT RESEARCH WITH INDUSTRY IN ECONOMIC AREAS. I PREFER OPEN FILE MAPS BECAUSE CORRECTIONS ARE MADE MORE QUICKLY AND THEY ARE MORE UP-TO-DATE.
- 0378 AIRBORNE RADIOMETRIC - TOO REGIONAL.
- 0409 (B) COMMENT: NOT QUALIFIED TO SAY.
- 0410 (B) COMMENTS: I WOULD LIKE TO SEE SERIES OF BEDROCK MAPS COMPLETED - OFTEN THERE ARE LARGE GAPS IN COVERAGE AT ONE SCALE - BUT MAPPING AT A DIFFERENT SCALE IS IN PROGRESS.
- 0415 (B) COMMENT: ITEMS NOT CHECKED ARE NEVER USED. SEE COMMENTS SECTION D.
- 0422 (A) COMMENT: CURRENT RESEARCH IS BECOMING TOO ELABORATE PARTICULARLY WITH UNNECESSARY INTRODUCTION OF ABSTRACTS. IN MOST CASES THE PAPERS ARE NOT "PROFESSIONAL" PAPERS BUT MERELY PROGRESS REPORTS AND A THROWING OUT OF IDEAS AFTER A FIELD SEASON THAT HAVE NOT BEEN COMPLETELY THOUGHT OUT. THEY SHOULD'T BE DISGUISED THROUGH FORMAT AS ANYTHING DIFFERENT.
- 0424 (A) NO COMPLAINTS. (B) NO COMPLAINTS.
- 0433 (A.) COMMENT: AS TO READABILITY, EXTREMELY VARIABLE|
- 0438 A.) COMMENT: THESE THINGS VARY STRONGLY BY AUTHOR. THE MOST IMPORTANT PROBLEM IS THE 1A,B,C, CURRENT RESEARCH FORMAT. BY ADOPTING THE ELABORATE FORMAT OF INDIVIDUAL PAPERS THE AUTHORS AND READERS ARE OFTEN DELUDING

THEMSELVES THAT THE PAPERS REPRESENT CRITICALLY REVIEWED DATA AND INTERPRETATIONS. THIS IS NOT SO. THE 1A,B,&C REPORTS ARE, AND SHOULD REMAIN, SIMPLE PROGRESS REPORTS. THE EMPHASIS ON PUBLICATION OF IDEAS WITH ADEQUATE SUPPORTING DATA SHOULD BE ON INDIVIDUAL PAPERS.

B.) COMMENT: REGIONAL COMPILATIONS ARE MOST USEFUL IN OPEN-FILE LINE FORMAT. UNCOLOURED VERSIONS CAN BE CORRECTED BY THE USER AND KEPT UP-TO-DATE BY THE G.S.C. ON A YEARLY BASIS.

0443 COMMENT: ECONOMIC GEOLOGY SERIES USUALLY OUT-DATED.

0444 (A) COMMENT: WOULD PREFER MORE ELABORATE CURRENT RESEARCH AND MORE FREQUENT ECONOMIC GEOLOGY.

(B) COMMENT: WOULD LIKE TO SEE MAPS RELEASED ON OPEN FILE AS EARLY AS POSSIBLE.

0454 (A) BOOKS SHOULD NOT EXCEED THE NORMAL 7" X 10" FORMAT WITH FEW EXCEPTIONS. WE DO NOT LIKE HAVING TO REFURNISH THE OFFICE FOR EVERY NEW PUBLICATION. THE NEW SIZES DO NOT TRAVEL WELL IN THE FIELD EITHER.

(B) MORE MAPS SHOULD BE ISSUED IN FINISHED RATHER THAN "PRELIMINARY" FORM.

0457 (B) COMMENT: I WILL BE GLAD TO SEE THE END OF NUMERICAL MAP FORMATION SYMBOLS.

0460 (B) COMMENT: 1:25,000 GEOCHEMICAL AND AEROMAG BASE MAPS POOR, TOPOGRAPHIC FEATURES OBSCURED, QUALITY OF MAP POOR.

0479 (B) COMMENT: NO COMMENT, NOT RELEVANT TO OUR WORK

0480 (A) COMMENT: PRESENT FORMATS ARE VERY SATISFACTORY.

0481 FAMILIAR WITH FORMAT AND FIND IT QUITE APPROPRIATE.

0491 COMMENT: (E-1A. 1) ECONOMIC GEOLOGY SERIES REQUIRE EITHER RE FREQUENT REVISIONS, OR SUPPLEMENTS. 2) CURRENT RESEARCH IS BECOMING TOO MUCH OF A 'CATCHALL' TYPE OF PUBLICATION.

(E-1B. 1) MINERAL OCCURRENCES SHOULD BE PLOTTED ON 1:18,000 BEDROCK GEOLOGY.

SECTION E2

0224 AT MAIN LIBRARY.

0233 BUT WILL BE SOON.

- 0346 AND I REALLY DO NOT LIKE IT AND I FIND MOST COPYING FACILITIES TERRIBLE WITH CHEMICAL PAPER AND POOR COPIERS. I'D RATHER BUY HARD COPY PLEASE.
- 0367 PLEASE DO NOT PUT MAPS ON MICROFICHE, IT IS A CATASTROPHY|

SECTION E3

- 0243 MJ SYSTEM MICROFICHE.
- 0377 JUST COMING INTO USE.

SECTION E4

- 0006 TO BE USEFUL MICROFICHE MUST BE ENLARGED. AS LONG AS BASIC DATA IS AVAILABLE IT CAN BE REPRODUCED AT COST. THUS PRODUCTION OF MICROFICHE SEEMS UNNECESSARY.
- 0016 DON'T KNOW
- 0035 IT IS A BIG NUISANCE; WOULD BE MORE USEFUL ON 5 1/4" COMPUTER DISKETTES, IF EVER THIS SHOULD PROVE FEASIBLE; OTHERWISE ORDERING HARD COPY BY TELEPHONE IS MORE USEFUL.
- 0040 HESITATE TO ANSWER AS A NON USER.
- 0050 NOT UNTIL MORE INDIVIDUALS HAVE THEIR OWN READERS, HOWEVER IT WOULD BE ACCEPTABLE TO ME PERSONALLY.
- 0091 THE MORE AND SOONER THE BETTER.
- 0106 MANY OF THE SMALL EXPLORATION COMPANIES WOULD NOT BE ABLE TO AFFORD PURCHASE OF MICROFICHE EQUIPMENT.
- 0129 WE HAVE MICROFICHE IN OUR OFFICE BUT VERY FEW OF THOSE TO WHOM WE SELL REPORTS HAVE IT. ALSO, IT IS CUMBERSOME TO USE FOR QUICK SCANNING OR REFERENCE CHECKS - WHICH IS WHAT MUCH OF OUR WORK IS.
- 0130 I RECOMMEND TO USE COMPUTER FILE AVAILABLE TO USE IN DETAILS BY CHEAPER COST.
- 0147 IT CANNOT BE TAKEN HOME TO READ AT NIGHT, WHICH IS THE ONLY TIME MOST OF US GET TO READ UNINTERRUPTED.

- 0157 MICROFICHE IS NOT AS HANDY HOWEVER STORAGE PROBLEMS MUST BE RECOGNIZED.
- 0191 MICROFICHE READERS ARE AVAILABLE LOCALLY, AND HARD-COPY REPRODUCTION CAPABILITY IS IMPROVING. WHEN READERS ARE MORE AVAILABLE IN BOTH PUBLIC AND INDUSTRIAL LIBRARIES IN MEDIUM SIZED OR SMALL TOWNS, MICROFICHE WILL BE MORE ACCEPTABLE.
- 0194 MICROFICHE USE WILL INCREASE ONLY IF SUBSTANTIAL PORTION OF MATERIAL IS KEPT ON MICROFICHE IN LIBRARIES INSTEAD OF FULLSCALE REPRODUCTIONS.
- 0202 COMMENTS ON MICROFICHE: IF ACCOMPANIED BY INTERPRETATION OR SUMMARIZING THE RESULTS IN A FEW PARAGRAPHS.
- 0215 CAN EXAMINE AT SURVEY OFFICES.
- 0217 PERHAPS RESTRICT SUCH DATA TO MICROFICHE AND OPEN FILE.
- 0223 BUT GIVE PEOPLE TIME TO GET USED TO THE SYSTEM. SINCE SOME LARGE JOURNALS HAVE SWITCHED TO THAT FORMAT, PEOPLE ARE ALREADY BECOMING AWARE OF IT. THAT MEANS YOU DON'T HAVE TO RUSH IT, SO DON'T, JUST IN CASE. WAIT 5-10 YEARS.
- 0224 COMMENT RE MICROFICHE: TO USE IT IS INCONVENIENT, IT IS NECESSARY FOR ONE TO GO TO THE MAIN LIBRARY. DIRECT COPYING OF INFORMATION IS VIRTUALLY IMPOSSIBLE.
- 0233 NECESSARY.
- 0254 COMMENT RE MICROFICHE: FOR ANY ONE WHO WEARS BIFOCALS MICROFICHE IS VERY DIFFICULT.
- 0276 NOT NOW USED FOR GSC PUBLICATIONS.
- 0287 BELIEVE GREATER USE INEVITABLE.
- 0301 NOT FOR SMALL COMPANIES UNLESS THE INDEXING SYSTEM IS VERY GOOD. WE RELY ON SPEED FOR OUR LIVING AND WE DON'T HAVE TIME TO PLOUGH THROUGH A WHOLE LOT OF MATERIAL. (FOR EXAMPLE THE WELL LOGS ETC., ON MICROFICHE PUT OUT BY DIAND ON NORTHERN WELLS).
- 0303 COMMENTS ON MICROFICHE: MY EXPERIENCE WITH MICROFICHE HAS SHOWN THAT THE MAPS GENERALLY ARE OF POOR QUALITY AND ARE HARD TO READ IN MANY INSTANCES. TABULAR DATA SHOULD BE PUBLISHED IN BOTH PRINTED AND MICROFICHE FORM BECAUSE A 'HARD COPY' IS USUALLY REQUIRED WHEN WORKING WITH TABULAR DATA AND THIS PRINTED COPY WILL SAVE DELAYS CAUSED BY BUSY MICROFICHE MACHINES AND COPIES WHICH ARE AVAILABLE IN ONLY LIMITED NUMBERS IN ANY COMPANY.

- 0307 A VERY GOOD WAY TO STORE LARGE QUANTITY OF DATA. IT SHOULD BE USED MORE OFTEN.
- 0310 AS AN INDIVIDUAL I DO NOT HAVE A MICROFICHE READER, BUT I CAN USE ONE IN THE OFFICE.
- 0319 THE MICROFICHE IS USED PRIMARILY FOR THE EXAMINATION OF WELL LOGS OR PRODUCTION (OIL & GAS) DATA. WRITTEN OR TABULAR DATA ON MICROFICHE IS RARELY USED AS MOST PEOPLE DO NOT KNOW IT EXISTS OR WILL NOT BOTHER TO USE A MICROFICHE READER.
- 0332 PLAN MAPS SHOULD BE AVAILABLE IN PAPER COPY.
- 0345 READERS OR PRINTERS NOT AVAILABLE EVERYWHERE. HUNDREDS OF CONSULTANTS/ INDEPENDENTS IN OUR INDUSTRY DON'T HAVE READY ACCESS TO MICROFICHE READERS.
- 0346 SEE ABOVE. IF YOU PUBLISH BY MICROFICHE, FILE IN MANY LIBRARIES. AN EXCELLENT FILE/ARCHIVE HARD COPY ON NON-CHEMICAL DURABLE PAPER.
- 0377 PROBABLY OK. ANYONE WHO GOES TO THE TROUBLE OF PORING OVER ALL THAT DATA WILL PROBABLY BE ABLE TO TAKE THE TROUBLE TO GET ACCESS TO A READER.
- 0381 I SUPPOSE IT WILL HAVE TO COME TO THIS BUT AT PRESENT, I DO NOT FAVOUR THIS MODE OF PUBLICATION.
- 0402 COMMENT RE MICROFICHE: GENERALLY, BUT IT DEPENDS IN LARGE PART ON THE SUPPORTING DATA, MICROFICHE IS A REAL SPACE SAVER, BUT NOT SUITABLE FOR MAKING NOTATIONS ON MARGINS AND COSTLY TO REPRODUCE ON HARD COPY.
- 0410 COMMENT RE MICROFICHE: GOOD STORAGE MEDIUM BUT ACCESS IS DIFFICULT FOR MANY (ACCESS TO READER, PRINTER).
- 0411 COMMENT RE MICROFICHE: I DO NOT FEEL THAT IT WOULD BE AS EASILY ACCESSIBLE IF MICROFICHE WAS USED IN LARGE QUANTITIES.
- 0412 COMMENT RE MICROFICHE: OUR MACHINES ARE OF POOR QUALITY, DESIGNED FOR SCANNING LOGS AND NOT APPROPRIATE FOR READING ANY LARGE QUANTITY OF LITERATURE.
- 0415 COMMENT RE MICROFICHE: RECEIVE MICROFICHE FROM GEOLOGICAL SOCIETY OF AMERICA.
- 0418 COMMENT RE MICROFICHE: IN EXTREME CASES WHERE THE DATA WOULD BE OF INTEREST ONLY TO A VERY LIMITED AUDIENCE.
- 0422 COMMENT RE MICROFICHE: IF THE DATA IS IN LARGE QUANTITY AND CLEARLY SUPPORTING DATA, NOT WHEN IT FORMS THE MAIN PART OF A PUBLICATION E.G - GEOCHEMICAL RESULTS WITH NO

SUPPORTING TEXT - SHOULD NOT BE PUBLISHED MICROFICHE.

- 0424 IF IT IS POSSIBLE TO SELECT AND COPY SEGMENTS OF THE INFORMATION ON FICHE FOR USE AWAY FROM THE READER, THEN THIS MEDIUM BECOMES MORE ACCEPTABLE FOR MY USE. COMMENTS RE COMPUTER TAPES: THE RECORDING OF BIOSTRATI- GRAPHIC DATA ON TAPE FOR EXTERNAL USE MIGHT BE USEFUL IF FACILITIES WERE AVAILABLE FOR READING AND PRINTING.
- 0432 COMMENT RE MICROFICHE: MICROFICHE IS IDEAL FOR STORING AND RETRIEVING BASIC AND TABULAR DATA.
- 0438 COMMENT RE MICROFICHE: BOTH SHOULD BE AVAILABLE BUT MICROFICHE ENCOURAGED.
- 0444 COMMENT RE MICROFICHE: LITTLE USE TO SMALL REGIONAL OFFICES AND NO USE WHATSOEVER IN THE FIELD. EVEN WITH READING FACILITIES IT IS IMPOSSIBLE TO VIEW TWO TABLES AT THE SAME TIME FOR COMPARISON.
- 0445 COMMENT RE MICROFICHE: FACILITY ONLY RECENTLY ACQUIRED. USE HOPEFULLY WILL INCREASE WITH FAMILIARITY AND EXPOSURE.
- 0448 COMMENT RE MICROFICHE: MAPS SHOULD BE PRINTED ON PAPER - COPIES MADE FROM MICROFICHE ARE:
 (A) HARDER TO READ THAN COLOUR MAPS
 (B) TAKE LONGER TO OBTAIN
 (C) DON'T LAST AS LONG IN THE FIELD
- 0452 COMMENTS RE MICROFICHE: I CAN READ MICROFICHE BUT CAN NOT OBTAIN A HARD COPY BY IN-HOUSE METHODS OTHER THAN TRANSCRIBING. I THINK IMPORTANT GRAPHS SHOULD BE AVAILABLE IN HARD COPY. COMMENTS RE COMPUTER TAPE: ALTHOUGH WE (THE COMPANY) HAVE AN IN-HOUSE COMPUTER, WE DO NOT HAVE THE HARDWARE OR SOFTWARE TO USE THIS PRODUCT. CURRENTLY, WE (THE COMPANY) DO NOT FORECAST A NEED IN THIS AREA.
- 0454 COMMENT RE MICROFICHE: AS READERS ARE NOT READILY AVAILABLE IN RURAL AREAS, PRINTS MUST BE AVAILABLE.
- 0457 COMMENT RE MICROFICHE: HYBRID PUBLICATION MAY BE AN OPTIONAL RESORT - SHORT PAPERS AND MAPS IN USUAL HARD COPY WITH BACK-UP DATA AND LONG DESCRIPTIONS IN MICRO FORM.
- 0479 COMMENT RE MICROFICHE: NO COMMENT, NOT RELEVANT
- 0480 COMMENT RE MICROFICHE: MICROFICHE IS USEFUL FOR LONG TERM STORAGE OF DATA, BUT SHELF-AVAILABLE HARD COPY IS MORE USEFUL WHEN DEALING WITH A SUBJECT ON A REGULAR (MONTHLY OR EVEN YEARLY) BASIS.

- 0489 COMMENT RE MICROFICHE: THERE IS DEBATE ABOUT THIS IN OUR GROUP. IT IS LIKELY TO BE TRIED FOR LARGE REPORTS IN THE NEXT FEW YEARS. COMMENT RE COMPUTER TAPES: DOUBT IF USEFUL FOR SOIL SURVEY WITH LIMIT OF TOPICS LISTED.
- 0491 THE LITERATURE IS NOW BECOMING SO VAST THAT SPACE ITSELF DEMANDS MINIATURIZATION, SUCH AS MICROFICHE. I HAVE ADVOCATED FOR GEOSCIENCE JOURNALS THE USE OF AN EXPANDED ABSTRACT, AND MICROFICHE PRESENTATION OF THE PAPER ITSELF. MICROFICHE PUBLICATION OF VOLUMINOUS SUPPORTING DATA IS A SENSIBLE APPROACH.
- 0495 COMMENT RE MICROFICHE: THEY ARE NOT EASY TO READ OR TO HANDLE.
- 0500 NOT APPLICABLE FOR MY NEEDS.

SECTION E5

- 0224 I DON'T KNOW.

SECTION E6

- 0035 COMMENTS RE COMPUTER TAPES: NEED TO BE ABLE TO READ GSC TAPES ONTO SMALL-COMPUTER DISKETTES. I AM NOT WELL INFORMED IN THIS REGARD.
- 0157 OUR ORGANIZATION HAS CONNECTIONS TO SEVERAL COMPUTER DATA BASES THROUGH THE LIBRARY.
- 0204 THE FAULT HERE LIES WITH ME AND MY ORGANIZATION, NOT WITH GSC.
- 0217 HAVE NOT USED, UNABLE TO ANSWER ACCURATELY.
- 0224 COMMENT RE COMPUTER TAPE: I BELIEVE SUCH A LABORATORY IS CURRENTLY BEING ESTABLISHED IN THE DEPARTMENT OF GEOLOGY WHICH IS UNDER RENOVATION NOW.
- 0254 DON'T KNOW.
- 0259 COMMENT RE COMPUTER TAPES: WE HAVE AT PRESENT NO ACCESS TO GEOSCAN DATA THROUGH OUR COMPUTER FACILITIES.
- 0287 BELIEVE GREATER USE INEVITABLE.

- 0310 THE USE OF TAPES MAY CHANGE IN FUTURE BUT SO FAR NONE HAS BEEN USED.
- 0319 IN GENERAL, IF WRITTEN MATERIAL OR TABULAR DATA IS AVAILABLE ON MICROFICHE ONLY, IT WILL BE IGNORED. COMMENT RE COMPUTER TAPES - I AM NOT FAMILIAR WITH THIS DATA THEREFORE, I OBVIOUSLY DO NOT USE IT.
- 0332 COMMENTS ON COMPUTER TAPES: COMPUTER RECORDING OF DATA IS AN ULTIMATE REQUIREMENT. FORMATS AND STYLES OF PRESENTATION SHOULD CONTINUE TO BE REFINED SO ULTIMATELY A CONSISTENT-FIXED FORMAT CAN BE ACHIEVED.
- 0345 COMMENTS RE COMPUTER TAPES: NOT CERTAIN ABOUT THIS MATERIAL. I AM NOT AWARE PERSONALLY OF ITS USAGE.
- 0346 A NECESSARY FACILITY FOR GEOPHYSICS - BUT NOTE YOU GET SUCKED IN BY COMPUTERS AND AT TIMES MISLEAD E.G. BATHYMETRY |
- 0366 FUTURE NEEDS FOR AIRMAG AND GRADIOMETER ETC. WILL PROBABLY INCREASE.
- 0376 COMMENTS RE COMPUTER TAPES: USED FOR LIBRARY SEARCHES.
- 0410 COMMENT RE COMPUTER TAPES: GOOD STORAGE MEDIUM BUT SHOULDN'T BE ONLY SOURCE OF DATA - MANY SMALLER FIRMS WOULDN'T HAVE CAPABILITY OF ACQUIRING DATA.
- 0432 COMMENT RE COMPUTER TAPES: HAVE NOT USED COMPUTER TAPES FROM THE G.S.C.
- 0441 COMMENTS RE COMPUTER TAPES: HAVE LITTLE INFORMATION RE: - AVAILABILITY OR COST OF TAPES; DATA CONTENT; FILE FORMAT; ETC.
- 0450 GEOREF?
- 0457 COMMENT RE COMPUTER TAPES: I DO NOT CONSIDER TAPES A CONVENIENT DATA STORAGE DEVICE WHEN SEEKING JUST A FEW NUMBERS. THEY ARE OK FOR THE TYPES OF DATA LISTED BUT NOT FOR GEOLOGIC REPORTS, ISOTOPIC DATES, ETC.
- 0470 COMMENT RE COMPUTER TAPES: I AM A RELICT OF THE PAST IN WORKING WITHOUT COMPUTERS, NO DOUBT, BUT THERE ARE MANY WAYS TO GET AT RESULTS. I HAVE OPENED UP 3 NEW (NOW OPERATING) MINES WITHIN THE LAST SEVEN YEARS, AND HAVE NO TROUBLE FINDING MEANS TO MY ENDS WITHOUT CREATING THE SUBSTANTIAL INFRA-STRUCTURE NEEDED FOR MAKING GOOD USE OF THE ASTONISHING NEW TECHNOLOGIES. I THINK A LARGE SEGMENT OF REAL INNOVATORS (OF WHICH I AM ONE) WILL NEVER ALLOW THEMSELVES TO BECOME BURIED IN SUCH INFRA-STRUCTURE. GSC SHOULD KEEP THE INFORMATION FLOW OPEN TO THEM.

- 0480 I WILL BE USING SOME OF THE GEOCHEMICAL DATA FOR ONTARIO LAKES.
- 0495 BORINGS IN SURFICIAL DEPOSITS. COMMENT RE COMPUTER TAPES: MANY INFORMATIONS ARE CODED- DIFFICULT TO USE. YOU HAVE TO LEARN THE CODE AND IT IS RELUCTANT TO USE.
- 0499 COMMENT RE COMPUTER TAPES: E-6 -MY ORGANIZATION HAS THE REQUIRED FACILITIES, BUT ACCESS TO THEM IS NOT EASY AND THEREFORE I SIMPLY DO NOT BOTHER TO USE THEM.
- 0500 NOT APPLICABLE FOR MY NEEDS.

SECTION E

- 0138 ALL ITEMS INDICATED TO BE GOOD ARE VERY USEFUL AND MUCH MORE THAN ADEQUATE. OFFSHORE MULTI-PARAMETER MAPS NOT USED BUT INDICATED TO BE ACCEPTABLE BY COMPARISON TO OTHER MAPS.
- 0140 RECONNAISSANCE AIRBORNE RADIOMETRIC MAPS ARE NEXT TO USELESS BECAUSE MOST OF THE VARIABILITY IS A FUNCTION OF THE NATURE OF OF THE SURFICIAL AND NOT THE BEDROCK MATERIAL

SECTION F: ACCESS.
-----**SECTION F1**

- 0012 BECAUSE, FAR FROM MAJOR CENTERS I HAVE NO ACCESS TO THE OVERALL POTENTIAL OFFERED BY GSC PUBLICATIONS.
- 0069 XEROXING FEES AND SEARCH FEES AT UNIVERSITY LIBRARIES ARE PROHIBITIVE.
- 0087 PURCHASE THE VOLUMES AS THEY COME OUT.
- 0129 OURS IS THE ONLY COMPLETE LIBRARY IN THE TERRITORY. INDIVIDUAL COMPANIES HAVE SMALLER LIBRARIES WITH SELECTED REPORTS.
- 0138 ALL GSC DOCUMENTS ARE WITHIN THE COMPANY LIBRARY AND ACCESS IS NO PROBLEM - EXCEPT OPEN FILE DATA.
- 0217 MOST GSC DOCUMENTS USED ARE USED REPEATEDLY AND SO I PURCHASE COPIES FOR INSTANT REFERENCE.
- 0223 BUT I'M BUILDING MY OWN.
- 0224 INTERLIBRARY LOAN FROM GSC.
- 0255 COMMENT: I PURCHASE GSC PUBLICATIONS FOR MY OWN LIBRARY, FOR SPECIFIC AREAS BEING INVESTIGATED. FOR OUT OF PRINT PUBLICATIONS, I USE THE UNIVERSITY OF CALGARY GALLAGHER LIBRARY.
- 0257 COMMENT: ALL LIBRARY SOURCES USED, SALES OUTLET VERY IMPORTANT - GOOD.
- 0258 I USE GSC LIBRARY MAINLY; CANMET LIBRARY FROM TIME TO TIME.
- 0287 WOULD APPRECIATE BETTER WORK AREAS IN VANCOUVER GSC LIBRARY, I.E. TABLES FOR LAYING OUT MAPS AND LIGHT TABLE.
- 0301 WE HAVE ACCESS TO THE LIBRARY OF A LARGE CONSULTING FIRM WHICH IN TURN IS A MEMBER OF THE 'INTER-LIBRARY LOAN' GROUP. THUS IT IS POSSIBLE FOR US TO OBTAIN VIRTUALLY ALL GSC MATERIAL VERY QUICKLY.
- 0308 THERE IS NOT MUCH GSC PUBLICATIONS IN ANY PUBLIC LIBRARY.
- 0310 IF YOU LIVE AND WORK SOME DISTANCE FROM A GOVERNMENT OR UNIVERSITY LIBRARY THE ACCESS WILL NOT FREQUENT. THIS APPLIES IN MY CASE.

- 0346 I SUSPECT OUR PUBLIC LIBRARY DOES NOT HAVE VERY MANY GSC PUBLICATIONS. I'VE NEVER EVEN THOUGHT OF LOOKING.
- 0367 MY CASE IS SPECIAL, I AM A FREQUENT USER OF OTTAWA GSC LIBRARY FOR ITS CONTENTS IN OVERSEAS PUBLICATIONS. FOR ME IT IS A TREASURE CHEST SAVING ME THOUSANDS OF DOLLARS ANNUALLY IN TRAVELLING.
- 0377 OUR GOVERNMENT FILES AND LIBRARY HAVE MOST PUBLICATIONS RELATING TO NEWFOUNDLAND OR GENERAL APPALACHIAN TOPICS. THE UNIVERSITY (MEMORIAL) HAS A COMPLETE COLLECTION, THAT CAN BE USED FOR OTHER PUBLICATIONS NEEDED.
- 0415 COMMENT: ALL INFORMATION PERTINENT TO MY COMPANY'S LAND BASE IN BOTH B.C. AND ALBERTA IS MAINTAINED IN OUR LIBRARY.
- 0424 INSTITUTIONAL LIBRARY - THIS MUSEUM MAINTAINS AN INTERNAL LIBRARY CONTAINING ALL HARD COPY GSC OUTPUT. THE COLLECTIONS ARE COMPLETE BACK TO INITIAL PUBLICATIONS AND SERVE ALL MY INDIVIDUAL NEEDS.
- 0432 COMMENT: PREFER TO BUILD MY OWN INDIVIDUAL LIBRARY. WHEN THIS IS NOT POSSIBLE, THE AGENCY'S LIBRARY FULFILLS MOST OF MY NEEDS.
- 0436 COMMENT: GOVERNMENT STORE.
- 0452 I USE THE GOVERNMENT LIBRARY FOR COMPANY WORK PROJECTS AND HAVE BEEN BUILDING MY PERSONAL LIBRARY FOR GENERAL REFERENCE MATERIAL.
- 0454 NOT READILY AVAILABLE IN MOST RURAL AREAS.
- 0481 GENERALLY GO TO LIBRARY AND ASK FOR SPECIFIC INFORMATION FOR A PARTICULAR LOCATION.
- 0489 NEXT MOST IMPORTANT SOURCE IS GSC
- 0491 COMMENT: MAIN SOURCE IS GSC LIBRARY. THIS SHOULD BE GIVEN MORE SPACE AND ASSISTANCE, AS A PRIORITY. A WORTHWHILE INNOVATION IN THE MAIN LIBRARY WOULD BE A LARGE READING - REFERENCE ROOM DEVOTED EXCLUSIVELY TO GSC PUBLICATIONS, OF WHICH THERE WOULD ALWAYS BE A COMPLETE SET AT HAND.
- 0499 COMMENT: I ALSO FIND THEM AT THE LOCAL SALES OUTLET OF THE EMR IN QUEBEC CITY.

SECTION F2

- 0233 PHYSICAL.
- 0346 I REGRET THE LOSS OF THE INFORMATION CANADA BOOKSTORE IN HALIFAX. THERE IS NOWHERE ONE CAN BROWSE AND BUY GSC PUBLICATIONS.
- 0423 DOWNTOWN CALGARY OUTLET?
- 0454 NOT READILY AVAILABLE IN MOST RURAL AREAS.

SECTION F3

- 0011 WISH GSC WAS OPEN LONGER HOURS AND ON SATURDAYS|
- 0035 WE ARE POORLY INFORMED ON THE DOCUMENT SERVICES MADE AVAILABLE BY GSC.
- 0039 HAVE RECEIVE ANY AND DON'T THEY EXIST
- 0041 LACK OF "INFO. CANADA SERVICES" IN MONTREAL|
- 0069 GEOREF WAS USED FOR 2 YEARS AS REGARDS A SPECIAL PROJECT, AND COULD BE USED AGAIN IF THE NEED AROSE. GSC MONTHLY INFORMATION CIRCULARS - NEED EDITING TO REDUCE AMBIGUITY CONTAINED THEREIN.
- 0102 IN ANY SUPERVISORY CAPACITY I DO NOT HAVE TIME OR THE NEED TO USE ANY OF THE ABOVE DATA FREQUENTLY OR DIRECTLY.
- 0129 THE ALPHABETIC INDEX BY PLACE, NAME IS BY FAR OUR MOST USEFUL TOOL FOR FINDING INFORMATION - GEOREF AND GEOSCAN HAVE BEEN USED VERY LITTLE. WE ARE THE "INFORMATION SERVICE" FOR GSC IN YUKON.
- 0163 DO NOT RECEIVE ANY OF THESE BUT WOULD LIKE TO..
- 0188 ACCESS IS ADEQUATE WOULD LIKE PUBLICATIONS TO BE MORE TIMELY.
- 0190 WOULD BE HELPFUL IF GREATER SUPPLY OF G.S.C. PUBLICATIONS MORE AVAILABLE IN CAPITALS - E.G., TORONTO - EITHER FOR PERUSAL OR PURCHASE. OTTAWA IS A LONG WAY AWAY.
- 0194 FOR (B) I AM OF TWO MINDS. THE USE AMONG COLLEAGUES HERE DIFFERS. PERSONALLY, I FOUND GEOREF TO BE 2-3 YEARS BEHIND OTHER COMPETITOR SOURCES OF INFORMATION (E.G.,

BULLETIN SOZUELETIGUE), BECAUSE GSA INDEXING IS SLOW. SUCH TIME LAG IS NOT ACCEPTABLE.

- 0259 COMMENT: OUR LIBRARY HAS ACCESS TO GEOREF.
- 0294 SINCE I RESIDE IN KELOWNA, B.C., AND BOTH COLLEGE AND CIVIC LIBRARIES ARE SMALL AND NOT RESOURCE-ORIENTED AS YET, GOVERNMENT PUBLICATIONS ARE SCARCE AND VERY INCOMPLETE, THUS RELATIVELY USELESS. VIEWING NEW RELEASES OF GSC DOCUMENTS IS OFTEN A MUST BEFORE BUYING - BUT NOT IN ALL CASES.
- 0301 I DON'T KNOW ENOUGH ABOUT THE LAST THREE.
- 0303 IN VANCOUVER THERE IS A LACK OF PROPER INDEX MAPS FOR GSC PUBLISHED MAPS THEREFORE YOU CANNOT FIND OUT WHAT PARTICULAR MAPS ARE PUBLISHED ON AN AREA. THIS TYPE OF DISORGANIZATION REALLY HINDERS THE UTILIZATION OF GSC PUBLICATIONS.
- 0307 I HAVEN'T SEEN GEOREF OR GEOSCAN SO I'M NOT QUALIFIED TO REPLY ON EFFECTIVENESS OF THESE SYSTEMS.
- 0310 SINCE THE DISCONTINUATION OF QUEEN'S PRINTER BOOKSTORES IT HAS BEEN DIFFICULT TO HAVE ACCESS TO A LOOK AT A COMPLETE RANGE GSC PUBLICATIONS. SINCE I BUY A LARGE NUMBER OF PUBLICATIONS MYSELF AND ALSO RECOMMEND TO THE COMPANY, I LIKE TO SEE THEM BEFORE PURCHASE (EXCEPT MAPS), WITHOUT TAKING TIME OFF FROM WORK TO DO SO. ALSO THE PRESENT OUTLETS HAVE A POOR ASSORTMENT, AND USUALLY ONLY TAKE ORDERS. NO GSC OFFICE IN TORONTO.
- 0319 I AM INFORMED BY A MEANS OF A COMPANY LIBRARY PUBLICATION (IN HOUSE) WHICH PUBLICATIONS HAVE RECENTLY BEEN ACQUIRED. I DO NOT HAVE THE TIME OR DESIRE TO EXAMINE ALL THE ABOVE PUBLICATIONS.
- 0330 INDEX MAPS ARE USEFUL.
- 0346 GSC MONTHLY INFORMATION CIRCULAR - IS THIS THE NOTIFICATION LIST? IF SO - YES. GSC YEARLY INDEX (PAPER 73-3, ETC) & GSC CUMULATIVE INDEX VOLUMES - PUT IN MY SUGGESTED SUBSCRIPTION PACKAGE.
- 0377 DON'T HAVE MUCH USE FOR THESE GENERALLY, EXCEPT TO KEEP INFORMED ON NEW DEVELOPMENTS THAT I MIGHT BE INTERESTED IN.
- 0410 COMMENT: I HAVE NEVER HEARD OF GEOSCAN OR GEOREF. MONTHLY INFORMATION CIRCULARS ARE OFTEN LATE.
- 0412 COMMENT: I DO NOT KNOW WHAT IS AVAILABLE STILL IN PRINT UNLESS SPECIFIC PAPERS ARE RECOMMENDED TO ME.

- 0418 COMMENT: NO SIGNIFICANT USE OF ANY OF THE ABOVE.
- 0424 GEOREF IS MODERATELY USEFUL AT PRESENT BUT WILL BECOME MORE EFFECTIVE AS THE DATA BASE EXPANDS.
- 0432 COMMENT: THE G.S.C. MONTHLY INFORMATION CIRCULAR IS THE MOST POPULAR AND EFFECTIVE UP-DATE OF NEW PUBLICATIONS.
- 0433 COMMENT: HAVE NOT HAD THE OPPORTUNITY TO MAKE USE OF GEOSCAN, BUT SOUNDS LIKE A MOST EFFECTIVE WAY OF PROVIDING ACCESS TO G.S.C. RESOURCES.
- 0457 COMMENT: I FIND MY OWN FILE SYSTEM SUPERIOR TO GEOREF. USING THE MONTHLY PUBLICATION LISTS I DO NOT NEED TO REFER TO THE YEARLY OR COMULATIVE INDEX.
- 0460 COMMENT: COMULATIVE INDEX VOLUMES TOO INFREQUENTLY PUBLISHED. AN UPDATED, COMPLETE COMPENDIUM SHOULD BE RELEASED EVERY 2 YEARS.
- 0467 COMMENT: I HAVE NEVER HEARD OF GEOSCAN.
- 0470 COMMENT: I AWAIT A PROBLEM AND THEN LOOK FOR PUBLICATIONS THAT MAY ASSIST SOLUTION.
- 0481 GENERALLY UNAWARE OF WHAT NEW GEOLOGICAL INFORMATION IS AVAILABLE IN MY REGION.
- 0489 FOR F-3 TO 01-10, I CAN'T OFFER AN OPINION AS I AM NOT FAMILIAR WITH THE SERVICES.
- 0491 COMMENT: F-3 SHOULD BE BROKEN DOWN INTO, SAY, THREE CATEGORIES, BECAUSE SOME SOURCES ARE ONLY PARTLY EFFECTIVE, ETC.) THERE ARE NOT ENOUGH SUBJECT INDEXES. I BELIEVE THE GSC SHOULD EITHER PUBLISH A SUBJECT INDEX COVERING 1843 TO PRESENT, OR COMPUTERIZE THE DATA, FOR RETRIEVAL AS NECESSARY.

SECTION F4

- 0346 ONLY OCCASSIONALLY. COMMENTS: I DO AGAIN STRONGLY SUGGEST A REASONABLE ANNUAL SUBSCRIPTION TO: (A) CURRENT RESEARCH, (B) MONTHLY CIRCULARS, (C) YEARLY INDEX, (D) CUMULATIVE INDEX, (E) VOL. ABSTRACTS ETC, THIS COLLECTION WOULD BE MOST USEFUL (INCLUDE UPDATED INDEX MAPS, INDEX MAPS TO NATIONAL RESEARCH MAPS OFFSHORE AND MARINE SCIENCE REPORTS. ONLY OCCASSIONALLY.

SECTION F

0340 GEOREF WAS USED AND FOUND TO BE REDUNDANT.

SECTION G: INFORMAL OUTPUT.
-----**SECTION G1**

0224 I WAS REFERRED TO THE FACULTY OF THE UNIVERSITY OF SASKATCHEWAN DEPARTMENT OF GEOLOGY FOR THE RESEARCH PROJECT THAT WOULD ALLOW ME TO CONTRIBUTE TO THE FIELD AND USE MY EDUCATION. FUNDS ARE SAVED FOR THEIR OWN.

SECTION G2

0346 AT WORKSHOPS, CONFERENCES, OFTEN SOCIAL THOUGH.

0458 VANCOUVER OFFICE

0474 CALGARY, OTTAWA, AND VANCOUVER.

SECTION G3

0069 IN RECENT YEARS THE PRESENCE OF GSC PERSONNEL HAS DECLINED TO AN UNSATISFACTORY LEVEL AT CONFERENCES AND WORKSHOPS.

0087 WITHIN BUDGET ALLOCATIONS, YES. COMMENT: QUAD MAPPING AND QUAD REPORTING ARE CONVENIENT WAYS OF STORING DATA.

0091 A HIGHLY QUALIFIED YES. REPRESENTATION AT CONFERENCES ABROAD IS NOT COMMENSURATE WITH THE TOTAL SCALE OF GSC OPERATION.

0217 POSSIBLY SOME GSC PERSONNEL PREFER NOT TO PARTICIPATE, BUT I KNOW SEVERAL WHO WISH TO AND WHO DO NOT RECEIVE TIME OR AUTHORIZATION. FOR THESE, PERMISSION TO PARTICIPATE SHOULD NOT BE CONSIDERED A REWARD BUT A RESPONSIBILITY AND WORTHY SERVICE. IT IS FRUSTRATING TO ATTEND A CONFERENCE AND NOT HAVE A CHANCE TO TALK SHOP WITH SURVEY COLLEAGUES. WE NEED THEIR INPUT VERBALLY VIA PRESENTATIONS AND OVER COFFEE AS WELL AS IN FORMAL PRINT.

0223 LIKE ANY ORGANIZATION, SOME DO AND SOME DON'T. YOU CAN'T FORCE SOMEBODY TO PARTICIPATE AND YOU SHOULDN'T BECAUSE MANY PEOPLE REALLY DON'T EXPRESS THEMSELVES VERY WELL VERBALLY. I THINK THE WRITTEN WORK HAS TO REMAIN YOUR BEST BET, COMBINED WITH INFORMAL MEETINGS AND LEAVE

FORMAL TALKS FOR THOSE WHO PREFER THEM AND DO THEM WELL.

- 0225 DISAPPOINTED AT THE LACK OF GSC PERSONNEL AT CONFERENCES ABROAD. E.G. THE CONF. ON GLACIAL SEDIMENTATION IN NORWAY AT WHICH A MEMBER OF THE GSC WAS EXPECTED TO GIVE A LECTURE||
- 0346 BUT I DON'T, FEW NON-CIVIL SERVANTS DO I EXPECT.
- 0422 IN MANY CASES G.S.C. PARTICIPATION OVERSHADOWS OTHER PARTICIPANTS, PARTICULARLY INDUSTRY, IN TERMS OF NO'S, QUALITY OF PRESENTATIONS

SECTIONS G1 TO G3

- 0460 G-3: G.S.C. NOT ADEQUATELY REPRESENTED IN WORKSHOPS - G.S.C. COULD INCREASE TRAVEL AND CONFERENCE ALLOWANCE FOR THEIR PERSONNEL. IT IS OFTEN THE ONLY WAY TO GET THE "HOTTEST" IDEAS.

SECTION G4

- 0040 NO OPINION
- 0145 AS I SAID BEFORE THIS IS THE MOST EFFECTIVE METHOD OF COMMUNICATION IN MOST CASES. I THINK THAT WHEREVER POSSIBLE SURVEY OFFICES SHOULD BE ENCOURAGED TO COMPETE IN THE OUTSIDE LITERATURE. I SERIOUSLY QUESTION THE NEED FOR GSC PUBLISHED PAPERS.
- 0163 ONLY IF THE OUTPUT IS ALSO MADE AVAILABLE THROUGH THE USUAL GSC SOURCES.
- 0186 TOO MUCH EMPHASIS ON PUBLISHING IN SCIENTIFIC JOURNALS (PRESUMABLY FOR THE SAKE OF ADVANCEMENT) OFTEN DELAYS SOME TYPES OF INFORMATION BECOMING AVAILABLE. FIRST PRIORITY SHOULD BE TO MAKE EXISTING DATA AVAILABLE - SECOND PRIORITY IS TO PUBLISH IN JOURNALS.
- 0214 GSC OUTPUT VIA CANADIAN MINERALOGIST IS A MAJOR SOURCE OF INFORMATION FOR ME. THE METHOD IS EFFECTIVE AS THE JOURNAL IS READILY AVAILABLE AND PUBLISHES WITH LITTLE DELAY.
- 0223 IT'S THE ONLY WAY TO REACH THE WIDER GEOLOGIC COMMUNITY WITH IDEAS THAT ARE RELEVANT REGIONALLY RATHER THAN

AFFECTED ONLY A SMALL FIELD AREA, AND WITH REVOLUTIONARY APPROACHES.

- 0294 EFFECTIVE FOR WHO? IF ONE DOES NOT HAVE ACCESS TO A RESOURCE LIBRARY OR DOES NOT SUBSCRIBE WIDELY TO JOURNALS, SUCH ARTICLES MAY EASILY BE MISSED, SINCE THEY ARE NOT GENERALLY REPORTED BY THE MEDIA, UNLESS PRESENTED AT A CONFERENCE AS WELL. IT MAY BE AN EFFECTIVE CHANNEL FOR THOSE WITH THE TIME AND ACCESS TO SUCH JOURNALS.
- 0310 THE PROLIFERATION OF SCIENTIFIC JOURNALS MAKES THIS TYPE OF COMMUNICATION LESS EFFECTIVE THAN A GSC PUBLICATION UNLESS YOU HAVE A GOOD SECRETARY TO FIND THEM FOR YOU. AS AN INDIVIDUAL MY TIME IS TOO LIMITED TO LOOK THEM ALL UP. A DIRECT REFERENCE TO A PARTICULAR PAPER IS NEEDED IN MY CASE, RATHER THAN MY USUAL PRACTICE OF SCANNING AVAILABLE PAPERS.
- 0319 IN ANY OF OF THE MA THE MAN MANY OTHER SCIE OTHER SC SCIENTIFIC JOUR JOURNALS I WOULD NO I WOU WOULD NOT NOT LIKELLY EVER COME COME INTO CONTACT WITH IT A IT AS AS I DO N I DO N DO NOT NOT HAVE TH THE TIME TIME OR OR INCLINATION TO BROWSE THROUGH THE MANY PUBLICATIONS NOW AVAILABLE.
- 0346 PROVIDING REPRINTS CAN BE HAD LIKE THE EARTH PHYSICS BRANCH DOES. WHEREIN OFTEN A REPRINT IS AVAILABLE ON REQUEST. WITH GSC/AGC I FIND I OFTEN DO NOT HEAR OF PAPERS IN JOURNALS I DON'T GET AND WE CAN'T AFFORD TOO MANY - I ONLY HEAR OF THEM WHEN I LOOK AT DISPLAY AT AGC - I SELDOM EVER HEAR OF EASTERN PETROLEUM GROUPS PUBLICATIONS. SHOULD THE MONTHLY INFORMATION CIRCULAR HAVE A PAGE OF TITLES/OR ABSTRACTS??
- 0402 G-4: WHERE POSSIBLE SHOULD BE INDEXED BY NTS IN THE YEARLY AND CUMULATIVE INDEXES.
- 0415 G-4: PROBABLY TO GEOLOGISTS WHO SUBSCRIBE TO OTHER SCIENTIFIC JOURNAL (THIS MAY BE EFFECTIVE). HOWEVER, AS A PEDOLOGIST, ACCESS TO G.S.C. INFORMATION IS PRIMARILY OBTAINED THROUGH THE MONTHLY INFORMATION CIRCULAR.
- 0422 AT PRESENT NOT ALL THAT MUCH THAT IS GERMANE TO MY PRESENT WORK HAS BEEN PUBLISHED BY G.S.C. PEOPLE IN OUTSIDE JOURNALS.
- 0432 COMMUNICATION WITH G.S.C. HISTORICALLY HAS BEEN MINIMAL. IN THE LAST 5 YEARS HOWEVER, MORE COMMUNICATION HAS OCCURRED PARTICULARLY IN THE FIELD AND AT SEMINARS. I WOULD LIKE TO SEE MORE PARTICIPATION OF G.S.C. MEMBERS AT CONFERENCES AND FIELD EXCURSIONS.
- 0435 MORE G.S.C. PERSONNEL SHOULD CONTRIBUTE TO GAC - MAC

ANNUAL MEETINGS.

0457 THE LOCAL GSC GROUP (CORDILLERAN) IS VERY ACCESSIBLE AND ACTIVE IN REGIONAL MEETINGS. WE EVEN USE THEM FOR TEACHING.

SECTIONS G1 TO G4

0102 THERE SHOULD NOT BE, IN MY OPINION, ANY ATTEMPT FOR BUDGETARY REASONS, TO CURTAIL THE ATTENDANCE OF QUALIFIED GSC PERSONNEL AT CONFERENCES AND WORKSHOPS.

0202 THIS IS FINE AS ADVANCED INFORMATION BUT THE FINAL REPORT SHOULD BE IN GSC PUBLICATION.

0204 EVEN IN B.C. I TEND TO CONSULT MORE OFTEN WITH PROVINCIAL GEOLOGICAL SURVEY PERSONNEL THAN WITH GSC PEOPLE; DISTRICT GEOLOGISTS SEEM TO HAVE A BETTER CONCEPT OF THE IMMEDIATE PROBLEMS THAT AFFECT MY FIELD PROJECT. BUT GSC PEOPLE ARE GREAT WHEN THINKING ABOUT "THE BIG PICTURE".

0224 I HOLD THREE DEGREES IN GEOLOGY - ALL FROM HIGHLY RESPECTED U.S. INSTITUTIONS. I AM IN THE AWKWARD POSITION OF BEING A WIFE OF A NON-GEOLOGIST. WE ARE LOCATED IN SASKATOON AND THOUGH I AM NOW ABLE TO BE AWAY FROM HOME TO RESUME MY CAREER, THERE IS NO OPPORTUNITY THAT I CAN FIND.

0258 YES TO G3 SHOULD BE QUALIFIED. I DON'T THINK THE YOUNGER GENERATION OF GEOLOGISTS IN GSC GET AROUND ENOUGH TO WORKSHOPS AND CONFERENCES. THESE ARE THE GEOSCIENTISTS THAT I WOULD LIKE TO SEE AT MORE CONFERENCES GIVING PAPERS AND PROVIDING DISCUSSION. THEY ALSO LEARN MORE THAN THE OLDER GEOSCIENTISTS AT SUCH MEETINGS.

0276 BETTER PUBLISHED BY GSC. NOT ALL OUTSIDE PUBLICATIONS CAN BE SUBSCRIBED TO.

0301 I HAVE A NUMBER OF PERSONAL FRIENDS IN THE GSC WITH WHOM I COMMUNICATE GENERALLY ON A SOCIAL BASIS. IN THE PAST I OFTEN ENCOUNTERED GSC OFFICERS IN THE FIELD AND AT CONFERENCES. NOW, SHOULD I WISH TO DISCUSS A TOPIC I USUALLY PHONE OR DISCUSS IT OVER LUNCH. EASY AND EFFECTIVE COMMUNICATION WITH MEMBERS OF THE GSC IS REALLY UP TO THE INDIVIDUAL. REGARDING G-4 I WOULD PREFER TO SEE THE GSC PUBLISH PRIMARILY THROUGH ITS OWN PUBLICATIONS. THIS, HOWEVER, MAY NOT BE LOGISTICALLY PRACTICAL.

- 0303 I HAVE FOUND THAT MOST GSC PERSONNEL ARE VERY COMMUNICATIVE DURING OFFICE VISITS BUT ARE NOT SO IN THE FIELD. I REALIZE THE PROBLEM WITH CONFIDENTIALITY OF THEIR WORK BUT I PERSONALLY FIND THEIR POLICY OF COMPLETE SECRECY TO BE SOMEWHAT OFFENSIVE. THEIR FIELD APPROACH COULD BE A BIT MORE OPEN ESPECIALLY WHEN THEY DESIRE TO EXAMINE EXPLORATION COMPANIES' CLAIMS AND ASK THE COMPANY TO GIVE THEM PRIVILEGED INFORMATION.
- 0307 IT WOULD BE GOOD TO COMBINE ALL GSC DATA THAT IS PUBLISHED IN OUTSIDE JOURNALS INTO A SEPARATE VOLUME UNDER THE GSC HEADING. THAT WAY IT IS MORE EASILY LOCATED SINCE NOT ALL JOURNALS ARE ACCESSIBLE TO EVERYBODY.
- 0376 HAVE ASKED GSC OFFICER TO TALK AT COMPANY SEMINARS AND BEEN REFUSED.
- 0377 RE G-3 GSC PERSONNEL ARE USUALLY VISIBLE AT CONFERENCES I ATTEND AND SEEM TO AUTHOR ON APPROPRIATE PROPORTION OF PAPERS AT THESE MEETINGS. I CAN'T TELL, IF THEY PARTICIPATE "SUFFICIENTLY" BECAUSE I HAVE NO WAY OF KNOWING HOW MANY BACK IN OTTAWA DO NOT PARTICIPATE AT ALL - OR RARELY. THE GSC, LIKE THE PROVINCIAL SURVEYS, SPENDS PUBLIC MONEY AND ITS OFFICERS HAVE AN OBLIGATION TO DISSEMINATE THEIR RESULTS QUICKLY AND WIDELY. CONFERENCES ARE A GOOD WAY TO DO THIS AND ALL SHOULD PARTICIPATE AS OFTEN AS POSSIBLE (I.E. AT BEST ONCE EVERY 2 YEARS). RE G-4 OUTSIDE PUBLICATIONS AND CURRENT RESEARCH ARE THE ONLY WAY THE GSC GEOLOGISTS HAVE OF GETTING STUFF OUT REASONABLY QUICKLY (GIVEN THE NOTORIOUS INEFFICIENCY OF THE GSC IN PUBLISHING ITS OWN STUFF). ALSO OUTSIDE JOURNALS HAVE A WIDE, AUTOMATIC CIRCULATION. THIS TYPE OF PUBLISHING IS TO BE ENCOURAGED BY GSC PERSONNEL.
- 0411 COMMENT: GS.C. VOLUME OF ABSTRACTS PRESENT IN THE LIBRARY. MOST OF MY CONTACT WITH G.S.C. RESEARCH COMES FROM OUTSIDE JOURNALS.
- 0437 G-3: THEY - AS I - DO RECEIVE SUFFICIENT FINANCIAL SUPPORT TO ATTEND MAJOR CONFERENCES IN THEIR SPECIALTIES.
- 0452 IN SOME INSTANCES, ARTICLES IN THE JOURNAL OF EARTH SCIENCES HAVE BEEN SO EXACTLY WHAT I WANTED THAT THE COINCIDENCE HAS BEEN UNCANNY. IN THESE CASES MY NEEDS WERE OBVIOUSLY MET AND I HAVE NO COMPLAINT WITH THE QUALITY OF THE MATERIAL PRESENTED.
- 0454 INFORMATION SHOULD FIRST BE MADE AVAILABLE THROUGH GSC PUBLICATIONS WITH PROPER ANNOUNCEMENTS.
- 0455 G-4 - LISTS OF SUCH PAPERS ARE AVAILABLE.

- 0458 MEMBERS OF THE G.S.C. STAFF ALWAYS MOST HELPFUL AND COOPERATIVE.
- 0481 SOMETIMES PHONE TO FIND OUT IF INFORMATION REQUIRED IS AVAILABLE AND NEAREST SOURCE.
- 0487 G-4: YES, PROVIDED INFORMATION IS AVAILABLE AND ADEQUATELY CATALOGUED.
- 0491 G.1-3: GSC PERSONNEL ARE NORMALLY VERY HELPFUL ON PERSONAL CONTACT. THERE SHOULD BE GREATER OPPORTUNITIES TO COMMUNICATE FINDINGS TO THE INTERNATIONAL GEOSCIENCE COMMUNITY THROUGH IMPROVED SUPPORT FOR G.S.C. OFFICERS TO PARTICIPATE IN INTERNATIONAL MEETINGS ABROAD.
- 0499 G-4-RE: SCIENTIFIC PUBLICATIONS. THIS IS AN EFFECTIVE WAY OF COMMUNICATION WITH A BUILT-IN QUALITY INSURANCE (I.E. PEER REVIEW)

SECTION G

- 0088 RECOMMEND GREATER USE OF OUTSIDE JOURNALS. I AM LOCATED IN THE SAME BUILDING AS GSC STAFF AND HAVE PUBLISHED A NUMBER OF JOINT ARTICLES WITH THEM - SO COMMUNICATION IS EXCELLENT AND VERY IMPORTANT.
- 0173 SHOULD A SURVEY BE INVOLVED MAINLY IN ACADEMIC RESEARCH OF THE TYPE PUBLISHED IN SCIENTIFIC JOURNALS? OR IS THE SURVEY MISNAMED AND IS IN FACT A RESEARCH INSTITUTE? EITHER THE ORIENTATION OR THE NAME IS FAULTY|. I STRONGLY FEEL THAT THE GSC SHOULD BE FIELD ORIENTED AND GENERATE MAINLY FIELD DATA AND REGIONAL MODELS.
- 0188 WOULD LIKE TO SEE EMPHASIS AWAY FROM PUBLICATIONS IN OUTSIDE SCIENTIFIC JOURNALS - PARTICULARLY NON CANADIAN AND OBSCURE PUBLICATIONS.
- 0190 DISCUSSION WITH G.S.C. PERSONNEL OFTEN MOST USEFUL. THIS IS EASY IN VANCOUVER, BUT IN TORONTO - A MAJOR GEOLOGICAL CENTRE - ACCESS TO BOTH PUBLICATIONS AND PERSONNEL IS QUITE LIMITED. FULLER USE OF G.S.C. IS RESTRICTED BY THE OTTAWA LOCATION. GREATER CO-OPERATION IS MOST DESIRABLE.
- 0235 I FIND THAT GSC PERSONNEL ALMOST WITHOUT EXCEPTION ARE VERY OBLIGING AND MORE THAN WILLING TO DISCUSS ANY PROBLEMS, DATA ANALYSIS ETC. ALSO IMPRESSED WITH ABILITY AND DEDICATION OF GSC FIELD WORKERS.
- 0320 OUTSIDE PUBLICATIONS ARE PROBABLY A BETTER DISPERSAL

METHOD OF IDEAS. THE TURNAROUND TIME IS PROBABLY LESS THAN WITH THE GSC'S OWN REPORTS. HOWEVER, THE GSC REPORT FORMAT IS ALSO VALUABLE IN THAT MORE HARD DATA CAN BE PUT IN PRINT.

- 0330 MANY GSC PERSONNEL TEND TO VISIT FIELD CAMPS ESPECIALLY IF THEY KNOW THE PEOPLE INVOLVED WITH THE PROJECTS. THIS IS AN EFFECTIVE WAY OF COMMUNICATING WITH THEM.
- 0340 THE ONLY WAY TO KEEP IN TOUCH WITH EASTERN BASED GSC PERSONNEL IS THE OCCASIONAL FIELD ENCOUNTER OR GOING TO OTTAWA. THOSE SCIENTISTS IN OTTAWA WORKING IN WHOLE OR IN PART IN WESTERN CANADA MUST BE AVAILABLE AT SCIENTIFIC MEETINGS IN WESTERN CANADA. MANY BITS OF IMPORTANT INFORMATION (TO ECONOMIC GEOLOGISTS) MUST BE LEFT OUT OF FORMAL PUBLICATIONS AND ARE LOST WITHOUT INTER-ACTIVE DIALOGUE WITH THOSE WHO NEED IT MOST.
- 0345 GSC PERSONNEL AND INSTITUTIONS COULD STAND A HIGHER PROFILE IN THE GEOLOGICAL COMMUNITY, AT LEAST IN ALBERTA. IT IS RARE INDEED WHEN THE GSC ORGANIZES OR INVITES OUTSIDERS TO SEMINARS, WORKSHOPS AND OPEN HOUSES. A POST-FIELD SEASON OVERVIEW, AND A CHANCE FOR INDUSTRY/ ACADEMIA TO HAVE INPUT INTO GSC FIELD/ RESEARCH PROGRAMS WOULD BE GOOD FOR EVERYBODY.
- 0423 PREFER GSC PUBLICATION BY GSC - MAINLY TO HELP REDUCE PROLIFERATION OF PUBLICATIONS OF DIFFERENT SORTS.

SECTION H: CURRENT RESEARCH AND NEW DIRECTIONS.

SECTION H1

0224 COULD I BE PUT ON A MAILING LIST?

0346 JUST AWARE

SECTION H2

0186 (F) MOST PEOPLE NOT AWARE THAT COMMENT EXPECTED.

0217 (F) NOT YET A TRADITION. PROBABLY (C) IS TRUE FOR THE MOST PART. HOWEVER, THE TRADITION FOR DEBATE VIA THIS PUBLICATION WAS NOT ESTABLISHED CLEARLY IN THE BEGINNING, AND SO LITTLE FEED-BACK ARISES EXCEPT VERBALLY. SECONDLY, CR SEEMS TO BE A GOOD MEANS TO PUBLISH INCOMPLETE STUDIES, AND TO DO SO WITHOUT FEAR OF TESTING IDEAS. IT IS AN EXCELLENT MEANS TO INITIATE INTEREST AND USUALLY GENERATES SOME USEFUL DISCUSSION WHICH THEN LEADS TO BETTER, MORE REFINED DATA AND INTERPRETATIONS FOR FORMAL PUBLICATION I.E. IT WORKS FINE AS IS.

0346 (F) PEOPLE IN CANADA DON'T LIKE TO ROCK BOATS ESPECIALLY IF GRANTS/CONTRACTS DEPENDANT IN ANY WAY ON GSC PERSONS.

0377 PROBABLY ALL APPLICABLE IN CERTAIN CASES.

0381 IN ORDER OF IMPORTANCE.

0422 MUCH OF WHAT IS IN CURRENT RESEARCH IS COMPLETELY NEW, ORIGINAL MATERIAL OR IDEAS, IDEAS NOT YET TESTED OR FAMILIAR TO MANY OTHERS, SO THAT THEY DO NOT PROVIDE CRITICISM. IN MY OWN EXPERIENCE, THE ONLY PEOPLE DOING RESEARCH IN MANY AREAS ARE GSC PEOPLE (PARTICULARLY IN THE NORTHERN CORDILLERA). THERE ARE FEW PEOPLE WHO ARE ACADEMICALLY AT THE SAME LEVEL AS THE GSC PEOPLE, WHO CAN PROVIDE INTELLIGENT DISCUSSION AND COMMENTS NOT BECAUSE THE GSC PEOPLE ARE INHERENTLY SUPERIOR, ONLY THAT THEY ARE THE ONLY ONES WORKING ACADEMICALLY IN MANY REGIONS. COMMENTS FROM INDUSTRY, PARTICULARLY WHERE THE GSC SCIENTIST HAS GOOD RAPPORT WITH INDUSTRY GEOLOGISTS ARE THROUGH A DIRECT APPROACH.

0431 (A) LACK OF COMMUNICATION.

0456 (E) PUBLICATION NOT KNOWN.

0457 I WOULDN'T WORRY ABOUT THIS. IT SHOULD PICK UP.

SECTION H3

- 0011 1. ACCESS ON WEEKENDS AND POSSIBLY NIGHTS TO GSC LIBRARY
2. LONGER OPENING HOURS AND OPEN ON SATURDAYS. I WOULD MAKE FAR MORE USE OF THE GSC IF THIS WAS DONE.
- 0035 GENERALLY SPEAKING THE GSC PROVIDES A GOOD SERVICE - AT LEAST TO THE EXTENT IT IS ALLOWED TO. COMPARED WITH THE PAST ITS INFLUENCE HAS DECLINED. HOWEVER BECAUSE MANY OF ITS FUNCTIONS (BC AND THE TERRITORIES APART) HAVE BEEN TAKEN OVER BY PROVINCIAL SURVEYS E.G. NEWFOUNDLAND. THE PRESENCE OF THE GSC IN MOST OF CANADA IS ONLY JUST TOLERATED, AND MANY OF THE PROBLEMS THEY TAKE ON ARE THOSE CONSIDERED BY THE PROVINCES TO BE OF MARGINAL INTEREST. IN SOME CASES EVEN UNIVERSITIES HAVE TAKEN OVER THE GSC FUNCTION. BY AND LARGE THIS REFLECTS THE GENERAL POLITICAL TENDENCY IN CANADA (REGRETTED BY SOME, WELCOMED BY OTHERS) AND IN THIS CONTEXT IT HAS TO BE RECOGNIZED THAT OUTPUT CAN ONLY REFLECT INPUT.
- 0040 AS A GENERALLY INFREQUENT USER OF GSC PUBLICATIONS ETC., I HESITATE TO COMMENT. WITH REFERENCE TO H-2, I SUSPECT THAT FEW GEOSCIENTISTS IN INDUSTRY HAVE THE SUPPORTIVE RESOURCES WITH WHICH TO DEVELOP DATA OF SUFFICIENT QUALITY TO MAKE ANY IN DEPTH COMMENTS OR CRITIQUES OF CURRENT RESEARCH OR PAST PROJECTS, PUBLICATIONS, ETC. OTHER THAN AT THE UNIVERSITIES, GOVERNMENT AGENCIES, ETC., PEOPLE ARE USUALLY BUSY FULL TIME, PURSUING THE ECONOMIC OBJECTIVES OF THEIR EMPLOYER OR BUSINESS.
- 0087 EXPAND 1:50,000 SCALE TOPO AND GEOLOGIC MAPPING OF IMPORTANT AREAS.
- 0088 GSC HAS TOO MANY PUBLICATION OPTIONS. THREE WOULD BE ENOUGH.
1. STUDIES OF 100 PAGES OR MORE AS 'BOOKS'.
2. A MONTHLY 'JOURNAL' TYPE PUBLICATION FOR STUDIES OF LESS THAN 100 PAGES. - ALSO INCLUDED INDEXES.
3. MONTHLY INFORMATION CIRCULAR.
- 0091 THE AMBITION TO BE ONE OF THE WORLD'S LEADING ORGANIZATIONS IN BOTH QUALITY AND QUANTITY OF OUTPUT IN THE MINERALOGICAL, PETROLOGICAL AND GEOCHEMICAL SCIENCES.
- 0102 FURTHER AMPLIFICATION OF THE TYPE OF GENERAL ECONOMIC GEOLOGICAL ACTIVITY BEING CARRIED OUT BY GSC PERSONNEL, WHICH I CONSIDER VERY IMPORTANT BASIC WORK ON WHICH

EFFECTIVE INDUSTRY EXPLORATION PROGRAMMES CAN BE BASED AND CARRIED OUT.

- 0106 MORE EMPHASIS ON GEOLOGICAL MAPPING, LESS ON GEOCHEMICAL AND GEOPHYSICAL PROGRAMS - DEFINITELY MORE DETAILED MAPPING| PERHAPS WHEN AN AREA IS SELECTED FOR MAPPING, A CO-ORDINATED PROGRAM CAN BE CONDUCTED WITH THE GEOCHEMISTS AND GEOPHYSICISTS.
- 0127 I HOPE I AM WRONG BUT I HAVE THE FEELING THAT A LOT OF GSC OUTPUT IS PERSONAL RESEARCH AND NOT ORIENTED TO THE WISHES OR DESIRES OF THE USER. THE SURVEY SHOULD STILL BE INNOVATIVE AND A LEADER BUT NOT IN THE DIRECTION OF ACADEMIC RESEARCH.
- 0129 SPEEDY RELEASE OF GSC MAPS AND REPORTS IN THEIR FINAL FORM, AFTER RELEASE AS OPEN FILES. AN EMPHASIS ON 1:250,000 SCALE REGIONAL MAPPING IN YUKON. A POLICY OF REPRINTING OUT OF PRINT REPORTS WHEN THE DEMAND/ SCIENTIFIC CONTRIBUTION WARRANT SAME.
- 0130 IT IS THE MOST PRODUCTIVE TO GSC OUTPUT IF IT INCLUDES THE DETAILED ECONOMICAL, SCIENTIFIC AND EDUCATIONAL INFORMATION. FOR EXAMPLE: 1) CONTROL AND FUTURE DEVICES OF POLLUTION (AIR) FROM THE ECONOMICAL MINES AND EXPLORATION (E.G., ACID RAIN, ETC).
2) THE LATEST PUBLICATION-INDEX OF SCIENTIFIC PAPERS.
3) HOW TO CONVERT TO THE EDUCATION. (HOW TO TEACH).
4) ANNUAL CALENDAR OF (INTERNATIONAL) SCIENTIFIC CONFERENCES AND MEETINGS.
5) TO ESTABLISH THE DATA CENTER (ANALYTICAL CENTER) WHICH EVERYBODY CAN EASILY USE.
6) HOW TO KEEP AWAY FROM THE NUCLEAR RADIOACTIVITY IN THE FIELD OR LABORATORY.
AND SO ON.
- 0186 MORE QUANTITATIVE DATA AVAILABLE ON TAPES E.G., K-AR DATA FILES, RB-SR DATA FILES, COMMON SR, COMMON P6 ANALYSES, S-ISOTOPIC DATA - WITH UPDATED VERSIONS AVAILABLE ANNUALLY. LESS EMPHASIS ON EXTERNAL PUBLICATIONS AND MORE EMPHASIS ON PUBLICATIONS THAT MAKE DATA AVAILABLE QUICKLY. CURRENT RESEARCH IS AN IDEAL FORMAT WITH SOLID EDITING AND COULD BE EXPANDED. MORE RESOURCES COULD BE DIRECTED TO GETTING MEMOIRS AND BULLETINS OUT QUICKLY INSTEAD OF HAVING SCIENTIFIC OFFICERS GO INTO THE FIELD AND GET EVEN FURTHER BEHIND.
- 0190 I BELIEVE THE GSC IS A MOST VALUABLE (INDISPENSABLE) ORGANIZATION.
SUGGESTIONS:
(1) KEEP INVESTIGATIONS RELEVANT TO POTENTIAL ECONOMIC USE - ESPECIALLY MAPPING.
(2) KEEP ABREAST WITH EVOLUTION OF GEOLOGICAL IDEAS RE: ORE GENESIS, ETC., E-9.

- A) IN WESTERN CORDILLERA, ATTEMPT TO DISTINGUISH VOLCANIC "CENTRES", FROM GROUND VOLCANIC FLOWS.
- B) IN SHIELD AREAS ATTEMPT TO UNRAVEL VOLCANIC AND SEDIMENTARY STRATOGRAPHY, INCLUDING CHARTY IRON FORMATIONS, AS A GUIDE TO PROSPECTING.
- C) FURTHER INVESTIGATION OF THE NATURE AND ORIGIN OF INTRACRATONIC BASINS AND THEIR ORE DEPOSITS.
- D) FULLER STUDY OF INTERMONTANE BASINS OF WESTERN CANADA

- 0194 1. DEADLINES FOR REPORTS AND PAPERS, BULLETINS, MEMOIRS
 2. UPDATING THE QUALITY OF THE INSTRUMENT-ORIENTED DISCIPLINES FROM GEOELECTRICS AND GEOMAGNETICS TO ORGANIC CHEMISTRY.
 3. THE GSC HAD A FIRST-CLASS TEAM AS LATE AS THE 50TIES. BREAKING UP THE SYSTEM INTO SMALLER REGIONAL OFFICES, WITHOUT A CENTRAL SERVICE IN THE DELEGATED FIELDS HAS NOT BEEN GOOD TO THE OVERALL QUALITY. A LACK OF PRECISE PHILOSOPHY IS ALSO TO BLAME. IS THE SURVEY PRIMARILY A FIELD MAPPING ORGANIZATION, IS IT SUPPOSED TO BE THE FOREMOST RESEARCH INSTITUTE, IS IT TO BE A SERVICE ORGANIZATION TO PROVINCIAL SURVEYS, TO INDUSTRY OR ALL OF THESE THINGS? IT'S LIBRARY IS SPLINTERED - TO SEARCH GEOLOGICAL LITERATURE IN OTTAWA REQUIRES COMMUTING BETWEEN AT LEAST 4 LOCATIONS IN OTTAWA AND HULL. IT NEEDS A SET OF PRIME GOALS, SECONDARY GOALS, CLEARLY DISCERNIBLE AND A TREMENDOUS BOOST IN EMPLOYEE MORALE.
- 0202 A TIME LIMIT SHOULD BE PUT IN THE FINAL PUBLICATION OF RESULT.
- 0223 I THINK THE PRESENT SYSTEM IS EXCELLENT. MY ONLY BEEF IS THAT LIKE THE REST OF US, GSC PEOPLE TAKE TOO LONG TO PUBLISH THEIR FINDINGS AND ARE TOO EAGER TO BEGIN THREE PROJECTS AT ONCE. SECONDLY, I THINK CANADA AND PARTICULARLY THE CANADIAN SHIELD SHOULD UNDERGO A REGIONAL GEOLOGICAL COMPILATION AT THE 1:1,000,000 SCALE AGAIN. FIELD INFORMATION AT 1:50,000 AND 1:250,000 SCLAES HAS BEEN PRODUCED AT A FURIOUS RATE FOR THE LAST 5-10 YEARS AND I THINK IT HAS TO BE PUT ON 1:100,000 MAPS EVEN IF THERE IS NO ACCOMPANYING PAPER. A LIST OF REFERENCES WOULD COVER THAT.
- 0224 I WOULD LIKE A JOB. IS IT POSSIBLE TO OBTAIN A CONTRACT TO DO STUDIES FOR THE GSC? I HAVE SPARE TIME TO WORK AND I AM WELCOME TO USE THE FACILITIES OF THE DEPARTMENT; HOWEVER, I NEED TO HAVE A PROJECT THAT TIES IN WITH THE AIMS OF THE RESEARCH PLANS OF AN ORGANIZATION. MOST WELCOME WOULD BE SOME LONG DISTANCE COLLEAGUES WITH WHOM I COULD, AFTER YEARS OF ISOLATION, COMMUNICATE. IS IT TOO FAR FETCHED AN INNOVATION TO ASK THAT THE GSC EMPLOY SOMEONE, AS MYSELF, WHO IS WILLING AND CAPABLE OF WORKING BUT HAS NO MOBILITY? I SHALL HAVE TO STAY IN THIS CITY IN THIS SITUATION FOR AT LEAST TWELVE MORE YEARS. NOT HAVING BEEN EMPLOYED SINCE BEING IN CANADA

AND THEREFORE NOT HAVING CONTRIBUTED TOWARD A PENSION FUND, PROSPECTS ARE FOR POVERTY IN OLD AGE. N.B. I HESITATED TO RETURN THIS QUESTIONNAIRE, BECAUSE, NOT BEING EMPLOYED, I USE THE LIBRARY MATERIALS QUITE DIFFERENTLY THAN IF I WERE WRITING PAPERS AND DOING STUDIES FOR PUBLICATION. IT IS NOT PROFESSIONAL TO FAIL TO REPLY TO QUESTIONNAIRES, AND SO I AM SENDING IT IN, THOUGH I REALIZE MY REPLIES WILL NOT HELP YOU MUCH IN YOUR STUDY. SORRY| I TRULY WOULD APPRECIATE YOUR SUGGESTIONS OF HOW I MIGHT BECOME GAINFULLY EMPLOYED, THUS JUSTIFYING THE IMMENSE INVESTMENT OF TIME AND MONEY IN MY EDUCATION. THERE MUST BE OTHER WOMEN IN MY SITUATION IN THIS COUNTRY| DOES ANYONE CARE?

- 0255 COMMENTS: INCLUDE OTHER SOURCES OF INFORMATION ON THE GEOLOGIC INDEX SERIES SIMILAR TO THAT DONE IN THE U.S. IN THEIR INDEX MAPS FOR THE VARIOUS STATES.
- 0258 IN MY EXPERIENCE, INNOVATION IN GEOLOGICAL SCIENCES IS DIFFICULT TO COME BY BUT I WOULD LIKE TO SEE THE GSC ADDRESS ITSELF TO THE FOLLOWING PROBLEMS:
 1) THE ORIGIN OF METALLOGENETIC AND/OR GEOCHEMICAL PROVINCES.
 2) THE NATURE OF THE PRIMITIVE ARCHEAN CRUST (CONSIDERING WE HAVE AN ENORMOUS AREA OF PRECAMBRIAN ROCKS I SHOULD THINK WE COULD COME UP WITH BETTER ANSWERS THAN POSTULATED BY CERTAIN PEOPLE WHO WRITE PAPERS ON THE SUBJECT IN COUNTRIES WHERE THERE ARE FEW IF ANY ARCHEAN ROCKS).
 3) EXTENDED RESEARCH IN THE ISOTOPE GEOLOGY OF METALLOGENESIS.
 4) GEOCHEMICAL PROSPECTING FOR OIL AND GAS
 5) GEOCHEMICAL PROSPECTING FOR BLIND MINERAL DEPOSITS, ESPECIALLY THOSE DEEPLY BURIED IN BEDROCKS.
- 0287 ON PUBLICATION OF NEW REPORTS AND MAPS (GEOLOGICAL) SUGGEST THAT PRIMARY AUTHOR MAKE ADVERTISED TOUR OF MAJOR GSC OFFICES AND MAKE THEMSELVES AVAILABLE FOR PERSONEL DISCUSSIONS.
- 0301 THE GSC DOES AN ADMIRABLE JOB IN MOST FIELDS. IF THERE IS ONE AREA IN WHICH I WOULD LIKE TO SEE A CHANGE (OR INNOVATION IF YOU PREFER) IS THE ATTITUDE THAT SEEMS RATHER PREVALENT AMONGST THE FIELD GEOLOGISTS (OF THE GSC) OF CONSIDERING THE POOR ECONOMIC OR INDUSTRY GEOLOGIST SOMEWHAT OF A SECOND-CLASS CITIZEN. THIS ATTITUDE IS REFLECTED IN THE GSC PUBLICATIONS BY THE OFTEN TERSE STATEMENTS ON DISCOVERIES OF POSSIBLE ECONOMIC IMPORTANCE. SUGGESTIONS THAT THIS OR THAT ASPECT MIGHT BE WORTH PURSUING OR THIS OR THAT LOCALITY VISITED FOR MORE INFORMATION COULD BE USEFUL TO THOSE OF US IN INDUSTRY.
- 0303 A FORMAT OF PUBLISHING INFORMATION ON 81/2 X 11

LOOSE-LEAF PAGES WOULD GREATLY SPEED UP INFORMATION DISTRIBUTION ESPECIALLY WHEN A NUMBER OF AUTHORS ARE CONTRIBUTING. IF SUCH A SYSTEM WERE EMPLOYED REVISIONS, ADDITIONS AND UPDATING DATA COULD BE EASILY AND CHEAPLY DONE. THE PUBLIC WOULD NOT WAIT 5 TO 10 YEARS FOR A MEMOIR TO COME OUT BUT COULD GET THE INFORMATION CHAPTER BY CHAPTER AS THE AUTHOR COMPLETES IT. SUCH A FORMAT MAY ENCOURAGE REVISIONS TO BE MADE ON THE BASIS OF COMMENTS FROM INDUSTRY OR OTHER GOVERNMENT GEOLOGICAL SURVEYS SO THAT THE FINALIZED MANUSCRIPT MAY BE MORE COMPREHENSIVE. THE LOOSE-LEAF PAGE TYPE OF PUBLICATION MAY HAVE MANY MERITS AND SHOULD BE LOOKED INTO. SUCH A FORMAT WOULD ELIMINATE THE PROBLEMS OF OUT-OF-PRINT MEMOIRS AND ALSO WOULD REDUCE BINDING COSTS AND PRINTING COULD BE DONE BY SIMPLE XEROXING.

- 0319 . BEDROCK GEOLOGY MAPPING OF THE ALBERTA AND BRITISH COLUMBIA FOOTHILLS AND FROM RANGES ON A 1:250,000 SCALE IS QUITE INADEQUATE AT THIS POINT IN TIME. ANYONE WORKING IN THIS AREA IS FORCED TO ACQUIRE MAPS FROM INDEPENDENT SOURCES (CONSULTANTS) AS THEY ARE NOT AVAILABLE. IT IS IMPORTANT THAT LIBRARIANS BE MADE FAMILIAR WITH ALL YOUR PUBLISHED DATA AS ALL WORKING GEOLOGISTS IN MY COMPANY MAKE THEIR REQUEST FOR INFORMATION TO THE COMPANY LIBRARIAN AND DO NOT DO A LIBRARY SEARCH THEMSELVES. MAY I SAY THAT THIS QUESTIONNAIRE IS PROBABLY THE WORST I HAVE EVER REQUESTED TO COMPLETE. IT IS A CLASSIC PIECE OF BUREACRATIC VERBAL DIARRHEA. IT HAS TAKEN ELEVEN PAGES TO ASK WHAT SHOULD HAVE TAKEN NO MORE THAN TWO PAGES AT MOST. THE QUESTIONS ARE VAGUE AND THE ANSWERS WHICH ONE IS FORCED TO MAKE COMPLETELY IRRELEVANT TO THE QUESTION. IF THE GSC IS TRULY INTERESTED IN EVALUATING THE USEFULNESS OF THEIR PUBLISHED DATA DISCARD THIS QUESTIONNAIRE AND GET SOMEONE OUTSIDE THE GOVERNMENT BUREAUCRACY TO DESIGN THEM A QUESTIONNAIRE.
- 0320 AN ATTEMPT TO RELATE "ACADEMIC" INFORMATION TO RESOURCE MANAGEMENT WITHOUT DILUTING THE ACADEMIC ASPECT WOULD BE WELCOME.
- 0332 THE GSC INTERFACES WELL WITH NATURAL RESOURCE COMPANIES AND IS CONSISTENTLY RESPONSIVE TO SUGGESTIONS. THEY ALSO ANTICIPATE AREAS OF INTEREST APPARENTLY AS A RESULT OF GOOD COMMUNICATION WITH INDUSTRY. THEREFORE, I DON'T HAVE ANY CONCRETE SUGGESTIONS OTHER THAN THE FEW POINTS MENTIONED EARLIER.
- 0346 THE GSC GRANTS FOR RESEARCH ARE ONLY FOR UNIVERSITIES. A PRIVATE COMPANY CAN NOT APPLY UNDER PRESENT RULES. I EARLIER MENTIONED A CHANGE OF ATTITUDE AT BIO/AGC SUPPORTED BY THE NECESSARY PERSONNEL/YEARS TO GET THE DATA KNOWN AND AVAILABLE. THIS WAS SUBJECT OF A LONG LETTER BY ME 2 YEARS AGO TO AGC/BIO WHICH YOU SHOULD

READ. HOWEVER, THE INERTIA SET IN AGAIN AT AGC. IF DATA ONLY BELONGED TO CHIEF SCIENTIST FOR 1 YEAR THEN WENT TOTALLY ON OPEN FILE YOU WOULD SEE TWO THINGS:

(A) FASTER PUBLICATION BY SCIENTISTS

(B) A LOT MORE USE OF YOUR DATA.

EVEN 2 YEARS OK I EXPECT. APPROACH VALID IN ALL AREAS OF GSC.

- 0353 PERHAPS A MARGINAL SUMMARY OF SIGNIFICANT ENGINEERING, GEOLOGY FEATURES IN YOUR MAPS SIMILAR TO YOUR PRESENT PRACTICE OF SUMMARIZING THE GEOLOGY. THIS MAY INCLUDE SUCH THINGS AS:
 -REGIONAL STRESS DIRECTIONS AND MAGNITUDE
 -PREVIOUS ENGINEERING PROBLEMS
 -SEISMICITY
 -SOIL TYPES
 -GROUND WATER CONDITION - I.E. IDENTIFY AQUIFER OR ZONES OF PERMEABILITIES I.E. FAULTS.
 -SUMMARY OF ROCK STRENGTHS IF ANY TESTED IN CONJUNCTION WITH MINING OR ENGINEERING WORKS.
- 0371 CONSIDERATION MIGHT BE GIVEN TO THE SURVEY AND PUBLICATION OF AIRBORNE E.M. MAPS - SIMILAR TO THE AEROMAGNETIC IN SELECTED AREAS.
- 0376 WOULD LIKE TO SEE CO-AUTHORING WITH INDUSTRY. WOULD LIKE TO SEE MORE INPUT FROM INDUSTRY RE CURRENT NEEDS. OFTEN ERRORS ARE DISCOVERED BY INDUSTRY, ESPECIALLY ON MAPS, BUT SUCH DISCOVERIES ARE NEVER INCORPORATED INTO UPDATED MAPS. MORE STUDIES RELATED TO ECONOMIC GEOLOGY.
- 0381 I GET THE IMPRESSION THAT OPEN FILE REPORTS ARE BECOMING THE FINAL PUBLICATION. HOPEFULLY THIS IS NOT THE CASE, AND PUBLICATION OF G.S.C. REPORTS AND MAPS CAN BE EXPEDITED.
- 0403 COMMENTS: SPEED-UP THE PUBLICATION OF REPORTS AND MAPS.
- 0405 COMMENTS: JUST KEEP UP THE TRADITION OF THE GEOLOGICAL SURVEY.
- 0410 COMMENTS: I AM CONTENT WITH SCOPE AND QUALITY OF GSC PUBLICATIONS. CONSIDERING THE ACCESS GSC HAS TO NON-TRANSLATED FOREIGN SCIENTIFIC INFORMATION - I WOULD LIKE TO SEE SOME INFORMATION ON WHAT IS AVAILABLE - PERHAPS AN SEMI-ANNUAL PUBLICATION OF TITLES OR EVEN TRANSLATED ABSTRACTS.
- 0411 COMMENTS: G.S.C. PUBLICATIONS WHICH I HAVE SEEN IN THE MEMOIRS AND BULLETINS, AT LEAST IN MY OPINION TEND TO BE A BIT TOO BROAD IN ASPECT AND I TEND TO LOOK FOR ARTICLES WHICH TEND TO BE MORE SPECIFIC AND AND THEREFORE MORE APPLICABLE TO MY OWN WORK. ARTICLES CONCERNING ECONOMICS GEOLOGY APPEAR TO BE FEW IN NUMBER AND ONCE AGAIN APPEAR

TO BE TOO BROAD AND GENERAL. I WOULD PREFER ARTICLES WHICH DEAL IN CONSIDERABLE DETAIL WITH SPECIFIC ORE DEPOSITS AND DONE BY PEOPLE WHO HAVE SPENT A CONSIDERABLE AMOUNT OF TIME AT A SINGLE DEPOSIT, STUDYING IT IN DETAIL.

- 0415 COMMENTS: ACCESS TO G.S.C. INFORMATION WOULD BE IMPROVED IF ESTABLISHED CLIENTS COULD PHONE FOR A MEMOIR, BULLETIN MAP, ETC. AND THEN BE CHARGED FOR THE EXACT AMOUNT. AT PRESENT, THE VANCOUVER OFFICE, AT LEAST, OPERATES STRICTLY ON A CASH BASIS RESULTING IN:
 (A) PRIOR SUBMISSION OF A CHEQUE FOR THE CORRECT AMOUNT.
 (B) CASH BASIS AT THEIR SALES OFFICE.
- 0422 CARTOGRAPHY SEEMS TO BE THE RATE DETERMINING STEP IN LENGTH OF TIME IT TAKES TO GET SOMETHING PUBLISHED (IE. COLOURED MAPS). IF THIS COULD BE SPEEDED-UP PERHAPS PUBLICATIONS COULD GET OUT SOONER (I HAVE A BULLETIN WHICH HAS NOW BEEN WAITING 2 YEARS FOR PUBLICATION)
- 0423 1. DOWNTOWN CALGARY OUTLET & INFORMATION CENTRE.
 2. HOLD OCCASIONAL 1-2 DAY SEMINAR TO ACQUAINT INDIVIDUAL GEOLOGISTS AND LIBRARIANS ON DATA AVAILABLE AND MEANS OF RETRIEVING - TAPE, FICHE, ETC.
- 0432 COMMENTS: I WOULD LIKE TO SEE MORE INTERACTION OF G.S.C. PERSONNEL WITH OTHER AGENCIES (E.G. PROVINCIAL GEOLOGICAL SURVEYS) DURING FIELD OPERATIONS AND PRIOR TO PUBLICATION. THIS WOULD ALLOW SOME INPUT FROM OTHER AGENCIES ON HOW THE END PRODUCTS SHOULD BE ISSUED. THERE SEEMS TO BE A VACUUM BETWEEN THE MAPPER AND THE USER OF THE MAP. MORE COMMUNICATION BETWEEN G.S.C. STAFF AND GEOLOGISTS IN THE PARTICULAR LOCAL AREA WOULD BE WELCOMED.
- 0433 COMMENTS: MORE EMPHASIS PLACED ON EXPLORATION INCLUDING, FOR EXAMPLE, STUDIES ON THE EFFECTIVENESS OF VARIOUS GEOCHEMICAL/ GEOPHYSICAL TECHNIQUES AND, AS MENTIONED PROVIOUSLY, A MORE RAPID RESPONSE TO THE CHANGING COMMODITY - AREAS OF THE MINING INDUSTRY.
- 0437 COMMENTS: CONTINUED AND/OR IMPROVED SUPPORT OF EXTERNAL RESEARCH AGREEMENTS PROGRAM. CLOSER LIAISON WITH EDUCATORS. GENERATION OF EDUCATIONAL AUDIO-VISUAL SETS OF TOP QUALITY IN SPECIFIC SUBJECTS.
- 0438 COMMENT: ENCOURAGE PUBLICATION OF PAPERS WITH GOOD DATA BASE TO SUPPORT ARGUING IDEAS; DOWNPLAY CURRENT RESEARCH AS A REFEREED PUBLICATION. THERE IS TOO MUCH HASTY PUBLICATION AND RETRACTION OF IDEAS. ENCOURAGE RAPID OPEN-FILE DISSEMINATION OF DATA, E.G., MAPS AND MEASURED SECTIONS SHOULD BE AVAILABLE IN OPEN-FILE BY MARCH OF NEXT YEAR. G.S.C. OFFICERS SHOULD BE PAID SALARIES COMPARABLE TO THOSE IN INDUSTRY TO ATTRACT AND

RETAIN TOP-QUALITY PERSONNEL. SALARIES SHOULD BE FLEXIBLE UP AND DOWN; PROPORTIONAL TO QUALITY AND AMOUNT PUBLISHED. GOVERNMENT CUT-BACK IN SPENDING SHOULD NOT AFFECT EM&R. ON THE CONTRAY SPENDING SHOULD INCREASE. RESEARCH BY EM&R ON DRILLING TECHNIQUES WOULD BE HELPFUL. WE ARE IN THE STONE-AGE IN SOME ASPECTS OF DIAMOND DRILLING TECHNOLOGY (I.E. HARDROCK VERSUS OIL).

0443 COMMENTS: MAINLY PUBLISH MORE GEOLOGY MAPS WITH LESS DELAYS.

0444 COMMENT: TIMELINESS.

0445 COMMENTS: MORE DISTRIBUTION FACILITIES IN CENTERS OTHER THAN OTTAWA AND VANCOUVER ARE NEEDED TO IMPROVE AND INCREASE USEAGE. MORE INPUT INTO FEDERAL GOVERNMENT DECISIONS AFFECTING MINING INDUSTRY.

0452 AS THE ONLY GEOLOGIST IN AN ENGINEERING COMPANY, I DO NOT HAVE THE BACK-UP RESOURCES OF A SENIOR GEOLOGIST OR LIBRARY STAFF FAMILIAR WITH GSC PUBLICATIONS. I HAVE FOUND IT DIFFICULT TO GAIN A COMPLETE KNOWLEDGE OF ALL OF THE MATERIAL PUBLISHED BY GSC. THIS INFORMATION IS NOT USUALLY DISSEMINATED AT UNIVERSITY AND IF CONTACT WITH THE GEOLOGICAL WORLD IS SPARSE IT CAN TAKE CONSIDERABLE TIME TO PUT THE PIECES TOGETHER. HAS GSC CONSIDERED PUBLISHING A "HERE'S WHAT WE DO AND HOW TO GET IT" - BOOKLET. I WOULD IMAGINE THAT IT WOULD BE USEFUL TO EDUCATIONAL INSTITUTIONS AS WELL AS THE "WORKING" OR INDUSTRIAL" WORLD. MY FEELING IS THAT A LOT OF PEOPLE WOULD LIKE TO KNOW MORE ABOUT GEOLOGY WITH RESPECT TO THEIR AREA OR A PROBLEM THEY HAVE, BUT DON'T KNOW WHO OR WHERE TO ASK.

0454 INDEXING SHOULD BE KEPT CURRENT AND PUBLISHED BY JANUARY 15TH ANNUALLY. REDUNDANT AND OUT OF DATE REFERENCE SHOULD BE DELETED.

0455 COMMENTS: H-2 REPORT OF ACTIVITIES SUMMARIZES CURRENT WORK AND RESULTS THAT ARE OF PRACTICAL APPLICATION.

0458 COMMENTS: THE OLD SUMMARY REPORTS (UNTIL THE 1930'S) WERE MOST USED AND WERE CONSULTED FREQUENTLY.

0460 COMMENTS:
 1) FASTER PUBLICATION.
 2) LESS RELIANCE ON CURRENT RESEARCH VERSUS MORE ON FLESHED-OUT, RAPIDLY PUBLISHED PAPERS.
 3) MORE ATTENTION TO ECONOMIC IMPLICATIONS OF ANY GIVEN PETROLOGICAL STUDY - I.E., RESEARCH SHOULD BE MORE APPLIED.
 4) SEMINARS, IF THEY EXIST AT THE G.S.C., SHOULD BE MADE OPEN. IF NOT, WHY NOT HOLD BI-YEARLY SEMINARS ON GIVEN SUBJECTS IN OTTAWA?

- 0470 COMMENTS: AS MENTIONED IN D2 AND C8, I THINK THE MATTER OF ECONOMIC EXTRACTABILITY OF VALUABLE EARTH PRODUCTS SHOULD BE ADDRESSED BY GSC. THIS SHOULD NOT BE LEFT TO METALLURGISTS AND CHEMISTS BECAUSE THEY USUALLY HAVE LITTLE CONCEPT OF THE GEOLOGICAL OPTIONS OPEN FOR UTILIZATION OF ALTERNATIVE SOURCES, ALTERNATIVE PHASES OF THE SAME MINED PRODUCT WITH WHICH THEY MAY BE HAVING DIFFICULTIES, OR SOURCES BETTER LOCATED. TO GIVE A CONCRETE EXAMPLE, I COULD SHOW YOU A POTENTIAL FOR DEVELOPMENT OF MINERAL BUILDING PRODUCTS (MODULAR BUILDING PARTS MADE FROM INORGANIC MATERIALS) THAT COULD SUBSTANTIALLY REPLACE LUMBER FOR THAT PURPOSE...A NEED THE WORLD WILL NEED IN THE 21ST CENTURY, IF NOT SOONER. WHY DOES THE GSC NOT STUDY THIS SORT OF SOURCE SO IT LEADS INDUSTRY?
- 0480 COMMENTS: MORE EMPHASIS ON GEOMORPHIC CONDITIONS AND PROCESS ON REGIONAL AND PROBLEM-SPECIFIC SCALES. MOST OF THIS RESEARCH IS CONFINED TO THE UNIVERSITIES AND TEND TO STAY THERE OR IS LOST (I.E. W.R.T. GRADUATES). THE G.S.C. COULD PROVIDE A USEFUL SERVICE BY EXAMINING THE STATUS OF SUCH RESEARCH IN CANADA (PAST AND PRESENT) AND GUIDING FUTURE RESEARCH BY SHOWING INTEREST IN FIELDS/STUDY AREAS NOT SUFFICIENTLY STUDIED AND PROVIDING THE BRIDGE BETWEEN ON- GOING GEOMORPHIC RESEARCH IN VARIOUS UNIVERSITIES. THIS WOULD ALSO ENABLE THE FURTHER DEVELOPMENT OF APPLIED AND ENGINEERING GEOMORPHOLOGY IN CANADA FOR PRACTICAL APPLICATIONS. THIS IS ESPECIALLY IMPORTANT FOR A GOVERNMENT AGENCY IN A COUNTRY SO LARGE, WITH RELATIVELY SMALL SCIENTIFIC POPULATION AND A TERRAIN AND CLIMATE SO DIVERSE.
- 0481 AS A PERIPHERAL USER OF GSC OUTPUT, I NEED ONLY KNOW WHAT NEW INFORMATION IS AVAILABLE THROUGH A VEHICLE THAT INFORMS IN A BRIEF SUCCINCT AND REGULAR MANNER. PERHAPS THE MONTHLY INFORMATION CIRCULAR DOES THIS BUT I DID NOT KNOW IT EXISTED.
- 0491 SEE ATTACHED SHEET.
 1. THE FIRST COMMENT I WOULD MAKE IS THAT I HAVE NEVER BEEN ASKED THIS QUESTION, BY THE GSC.
 2. THERE SHOULD BE A FALL OR WINTER RELEASE OF USEFUL ECONOMIC DATA GAINED DURING THE SUMMER, RESULTING FROM THE GSC'S FILED PROGRAM. THIS DOES NOT HAVE TO BE A 'FINISHED PUBLICATION'. INDEED, HANDDRAWN MAPS AND SKETCHES, REPRODUCTIONS OF FIELD NOTES, ETC, WOULD SUFFICE. THE ESSENCE IS SPEED. I BELIEVE THIS WAS THE ORIGINAL INTENTION OF THE REPORT OF ACTIVITIES (A GOOD RELEASE) BUT THIS HAS BECOME A SORT OF 'CATCHALL' PUBLICATION. IN APPROACHING THIS THIS SUGGESTED ECONOMICALLY- ORIENTED RELEASE THERE SHOULD BE MORE FIELD SAMPLING AND ASSAYING, AND PUBLICATION OF THE RESULTS. ALL GOSSANS, FOR EXAMPLE, SHOULD BE SAMPLED AND ASSAYED.

3. AIRBORNE MAGNETIC DATA COULD BE IMPRINTED ON THE BACK OF NEWLY RELEASED 1 50,000 GEOLOGICAL MAPS. THIS WOULD NOT AFFECT THE NORMAL USAGE OF THE GEOLOGICAL MAPS BUT ON A LIGHT TABLE THE AEROMAGNETIC DATA COULD BE SEEN SUPERIMPOSED OVER THE GEOLOGY, CONVENIENTLY AND ACCURATELY.

4. A REPORT SHOULD BE PRESENTED ANNUALLY-IN A SENSE, A PUBLIC ACCOUNTING-BY THE DIRECTOR-GENERAL OR CHIEF GEOLOGIST AT THE C.I.M. MEETING, OR PROSPECTORS' MEETING, TO DESCRIBE THE G.S.C.'S ACTIVITIES OF THE PAST YEAR, TO LIST THE IMPORTANT FINDINGS AND TO OUTLINE PLANS FOR THE YEAR AHEAD. SUCH A PRESENTATION COULD BE FOLLOWED BY A SELECTION OF GSC SPEAKERS ON SOME OF THE TOPICS COVERED BY THE DIRECTOR- GENERAL, WHICH WOULD PROVIDE A VERY INFORMATIVE AND USEFUL TECHNICAL SESSION AND ONE THAT COULD BE A HIGHLIGHT OF EACH ANNUAL MEETING.

5. EARLY GSC REPORTS SHOULD BEGIN TO BE REISSUED BY OFF-SET OR MICROFICHE. SUCH REPORTS ARE EVEN SCARCE IN THE GSC LIBRARY.

6. THERE SHOULD BE THE APPOINTMENT OF A PROFESSIONAL INFORMATION OFFICER AND THE ASSIGNMENT OF A WIDELY ADVERTISED INFORMATION NUMBER TO WHICH INDUSTRY, THE PUBLIC AND OTHERS MAY CALL FOR INFORMATION. A 'HOT-LINE' TO THE GSC. (I HAVE HAD MANY EXASPERATED CALLERS COMPLAIN THAT I WAS THE 5TH OR 6TH PERSON THEY HAVE HAD TO CALL) CALLERS SHOULD HAVE TO MAKE ONLY THE ONE CALL - TO THE CENTRAL NUMBER - TO OBTAIN THE INFORMATION OR TO BE REFERRED TO THE APPROPRIATE OFFICER OR TO HAVE THE OFFICER RETURN THE CALL.

7. THERE SHOULD BE MORE FREQUENT REVISIONS OF THE ECONOMIC GEOLOGY SERIES, OR ISSUANCE OF SUPPLEMENTS TO BRING CURRENT VOLUMES UP-TO-DATE.

8. A GREATER EFFORT SHOULD BE MADE TO SELL THE OUTPUT. SURVEY PUBLICATIONS ARE THE SURVEY'S BASIC PRODUCT, AND THERE IS NO POINT IN PRODUCING A PRODUCT IF YOU DO NOT ATTEMPT TO SELL IT. THIS WOULD INVOLVE MORE DISPLAYS, MORE ADVERTISING AND MORE PR. IT SHOULD ALSO INCLUDE THE APPOINTMENT OF A PUBLIC RELATIONS OFFICER, SOMETHING THE SURVEY HAS LONG NEEDED.

9. PUBLICATION OF A SUBJECT INDEX TO GSC REPORTS FROM 1843-1980.

10. ESTABLISHMENT OF A LIBRARY OF VIDEO-TAPED TALKS BY GSC OFFICERS FOR USE BY UNIVERSITIES, MINERAL SCIENCE CLUBS, ETC. TOPICS WOULD INCLUDE DISCOURSES ON MAJOR FEATURES OF CANADIAN GEOLOGY, SUCH AS THE PRECAMBRIAN SHIELD, GRENVILLE PROVINCE, HURONIAN STRATIGRAPHY, APPALACHIAN, ETC; MAJOR GSC LABORATORY ACTIVITIES, SUCH AS GEOCHRONOLOGY, ROCK ANALYSES; SPECIALIZED SURVEYS, SUCH AS RADIOMETRIC, GEOPHYSICAL AND GEOCHEMICAL; AND SO ON. THE SCOPE IS VAST, AND THE TALENT IS AT THE SURVEY. ALL LOGAN CLUB TALKS SHOULD BE VIDEOTAPED. IN TIME THE LIBRARY COULD BECOME A VALUABLE REFERENCE BASE AND ONE OF GREAT HISTORIC VALUE.

11. CONSIDERATION SHOULD BE SERIOUSLY GIVEN TO THE HOLDING-ANNUALLY-OF AN INFORMAL ONE (OR TWO) DAY WORKSHOP AT THE MAIN GSC CENTRES SUCH AS OTTAWA, CALGARY AND DARTMOUTH, HIGHLIGHTED BY A TECHNICAL SESSION AND A POSTER SESSION. VISITORS MAY THEN FOLLOW-UP WITH OFFICE VISITS AFTERWARD SHOULD THEY SO WISH. THIS WOULD PERMIT DISSEMINATION OF RESULTS OF RECENT LABORATORY AND FIELD RESEARCH WITH PERSON- TO-PERSON CONTACT; AND AN OPEN INVITATION SHOULD BE EXTENDED TO ALL GSC OFFICERS TO MOUNT A POSTER AND PARTICIPATE. I WOULD ENVISAGE THIS AS A WORKSHOP DEVOID OF A LOT OF FORMAL PREPARATION BUT RATHER ONE WHERE INFORMALITY IS THE KEY. ONE MIGHT BE HELD TO JUDGE ITS ACCEPTABILITY AND USEFULNESS.

- 0495 COMMENTS: THE MONTHLY INFORMATION CIRCULAR OF GSC SHOULD HAVE A BETTER CIRCULATION AMONG THE GEOLOGICAL COMMUNITY. SEND 1 COPY AT EVERY DIRECTORS OF GOVERNMENT AGENCIES INVOLVED IN GEOLOGICAL WORK. THE SAME THING WITH CURRENT RESEARCH. THOSE DOCUMENTS ARE AT OUR LIBRARY WHERE IT IS NOT EASY TO HAVE THE ONLY COPY THEY HAVE.
- 0499 COMMENTS: H-3: I WOULD APPRECIATE MORE OUTPUT IN THE FIELD OF ENGINEERING GEOLOGY EVEN IF I AM AWARE THAT THIS FIELD IS NOT HIGH ON THE PRIORITY LIST OF GSC. NOT ONLY IS THERE A WEALTH OF INFORMATION IN THIS FIELD BUT VERY LITTLE IS PUBLISHED ON THE PROVINCE OF QUEBEC.
- 0500 -NOT CLEAR WHAT THE GSC IS AFTER ON SOME ASPECTS OF ITS MISSION
-NOT CLEAR AS TO WHERE IT FITS IN RELATION TO PROVINCIAL SURVEYS.
-LACK OF CONTINUITY BECAUSE OF CONSTANT REORGANIZATION AND CHANGE IN OBJECTIVES.

SECTION H

- 0138 SPEEDING UP OF THE PRESENTATION OF DATA TO THE GENERAL PUBLIC, QUITE OFTEN MANY OF THE DATA IS OUT OF DATE BY THE TIME MEMOIRS/ BULLETINS/PAPERS RELEASED. MORE ATTENTION TO THOSE REGIONS KNOWN TO BE OF ECONOMIC IMPORTANCE. GSC IS OFTEN SLOW TO GO INTO "NEW" METALLOGENIC AREAS OR DO NOT PUT FORWARD NEW METALLOGENIC AREAS OR IDEAS.
- 0145 MANY PEOPLE AT THE GSC ARE ACTIVE AGGRESSIVE SCIENTISTS COMPETING IN THE WORLD OF INTERNATIONAL SCIENCE. HOWEVER THERE ARE ALSO MANY VERY GOOD PEOPLE WHO ARE EXTRAORDINARILY UNPRODUCTIVE AS VIEWED FROM OUTSIDE. IT APPEARS THAT FOR SOME THE GSC PROVIDES A "WARM COCOON"

WHERE THEY CAN EITHER CURL UP, ENDLESSLY PERFECTING THEIR PET PROJECT WITHOUT HAVING TO EXPOSE IT AND THEMSELVES TO THE CRITICISM OF THE OUTSIDE WORLD OR, ALTERNATIVELY, ACTIVELY SEEK ADMINISTRATIVE WORK WHICH AGAIN PROTECTS THEM FROM EXTERNAL SCRUTINY. SOME (A FEW) MEMBERS OF THE STAFF ARE BEST LEFT ALONE SINCE THEY HAVE LITTLE TO CONTRIBUTE. WITH OTHERS, THERE IS A LAMENTABLE WASTE OF TALENT AND DATA (MUCH OF IT PRODUCED BY THE ANALYTICAL SERVICES OF THE GSC AND NOT BY THE INDIVIDUALS HOLDING IT UP) DUE TO THE PROTECTIVE CIVIL SERVICE ENVIRONMENT. I WOULD LIKE TO SEE THESE PEOPLE JOLTED OUT OF THEIR RUT, ENCOURAGED AND GIVEN THE CONFIDENCE TO EXPOSE THEMSELVES TO THE WORLD. PERHAPS THERE IS AN ATTEMPT TO DO THIS. IF SO IT IS INEFFECTIVE IN MANY WELL KNOWN CASES. I SUSPECT THE INTERNAL ASSESSMENT SYSTEM DOES NOT HAVE THE RUTHLESSNESS THAT IS PRESENT IN INDUSTRY AND, IN THE EXTERNAL REVIEWS SYSTEM REQUIRED FOR PROMOTION IN UNIVERSITIES, ALSO PRESENT IN A LESSER WAY IN THIS ENVIRONMENT.

- 0157 BECAUSE OF MY NEW RECENT ASSIGNMENT IN ENGINEERING MATERIALS RESEARCH, I DO NOT HAVE AS MUCH NEED FOR GSC OUTPUT AS I DID IN MY PREVIOUS ASSIGNMENT; HOWEVER I DO STILL HAVE SOME. I LIKE THE OUTPUT, AND I REALLY DO NOT HAVE ANY SUGGESTIONS FOR CHANGE.
- 0163 DO NOT RECEIVE CURRENT RESEARCH BUT WOULD LIKE TO
- 0171 MORE SUPPORT FOR ATTENDANCE AT CONFERENCES. DECREASE THE LENGTH OF TIME REQUIRED TO PRINT OUT MAPS. (I.E., INCREASE YOUR INVESTMENT TO THAT END). MINIMIZE INVESTMENT IN FASHIONS AND MIXIMIZE INVESTMENT IN BASIC CRUSTAL DATA. THE LENGTH OF TIME REQUIRED TO GO THROUGH THIS FORM AND FILL IT OUT WILL MILITATE AGAINST COMPLETION AND AGAINST THOUGHTFULNESS. THERE WILL BE A TENDENCY TO REINFORCE PERCEPTIONS RATHER THAN TRUTH. PERHAPS THIS IS WHAT YOU WANT.
- 0173 LOGAN WAS BASICALLY A FIELD GEOLOGIST. THE GSC SHOULD FOLLOW HIS PATH. INSEMINATE THE UNIVERSITIES OF THE COUNTRY WITH THE ACADEMIC ORIENTED STAFF.
- 0188 CHANGE FORMAT FOR PUBLISHING LAKE SEDIMENT DATA - USE NUMBERS, NOT SYMBOLS.
- 0294 DECENTRALIZATION - WHO IN WESTERN CANADA EVER GETS THE OPPORTUNITY TO VISIT OTTAWA, UNLESS ON BUSINESS. A BETTER WAY TO SERVE THE NEEDS OF THE PUBLIC MAY BE THROUGH COLLEGE LIBRARY SYSTEMS - FASTER INTER-LIBRARY LOANS, FOR EXAMPLE. ALSO, FOR THE MINERAL EXPLORATIONIST, IT WILL BE EXTREMELY HELPFUL TO HAVE REFERENCE SETS ON FILE OR EVEN FOR SALE OF REPRESENTATIVE ROCK SUITES, INCLUDING ALTERNATION PHENOMENA, IN TYPE MINERAL DEPOSITS RATHER THAN JUST THE

ORE AND GANGUE ALONE. READING, ALONE, JUST DOESN'T GIVE THE PICTURE NEEDED FOR RECOGNIZING ECONOMICALLY FAVORABLE SETTINGS OUTSIDE OF THE ESTABLISHED SITES.

- 0307 I WOULD LIKE TO SEE THE GSC CONTINUE TO BE INVOLVED IN ACADEMIC RESEARCH PROBLEMS AND ALSO BASIC MAPPING AND REMAPPING. THESE SERVICES ARE EXTREMELY VALUABLE TO INDUSTRY. SMALL COMPANIES AND INDIVIDUALS ESPECIALLY CANNOT AFFORD TO DO ALL SORTS OF RESEARCH.
- 0340 THE ECONOMIC SIGNIFICANCE OF FIELD EVIDENCE (IN REPORTS) IS LACKING. TOO MANY REPORTS DESCRIBE THE ROCKS BUT NOT THE SIGNIFICANCE OF THE ROCKS. MINES ARE SELDOM FOUND BY MAJOR COMPANIES BUT THERE IS DEFINITELY A TREND TO DISCOVERIES BY MAJORS. COULD THIS TREND BE DUE TO, IN PART, THE LACK OF ENCOURAGEMENT IN CURRENT WORK FOR THE UNTRAINED PERSON. CURRENT MAPPING IS LIKE "PURE RESEARCH"; IT LACKS THE BREATH OF LIFE THAT THE OLD YUKON REPORT ALWAYS CONTAINED. ENCOURAGEMENT TO EXAMINE THE FIELD WORK SEEMS DIRECTED AT THE MAJOR COMPANIES OR TO FELLOW SCIENTISTS OF EQUAL OR LIKE TRAINING.
- 0345 CURRENT RESEARCH IS USEFUL AND INTERESTING, BUT IS DIFFICULT VOLUME TO DEAL WITH OWING TO ITS BULK. MORE USEFUL TO THE READERSHIP WOULD BE SMALLER VOLUMES ORGANIZED MORE ALONG TOPICAL LINES, SO THAT SUCH A MIXTURE OF INTERESTS ISN'T PUT OUT AT ONCE. FOR EXAMPLE, A VOLUME ON CURRENT RESEARCH IN ARCTIC CANADA, OR C.R. IN APPALACHIAN CANADA, OR C.R. IN GEOPHYSICS AND GEOCHEMISTRY WOULD BE MUCH MORE SATISFYING AND EASY TO FIND PERTINENT PAPERS.
- 0402 I BECOME ANNOYED WHEN I SEE THE LOCATIONS OF MEASURED STRATEGRAPHIC SECTIONS ON G.S.C. MAPS, AND THEN CANNOT EASILY OBTAIN COPIES OF THE MEASURED SECTIONS. IF PUBLISHED THEY SHOULD BE REFERENCED ON THE MAP. IF NOT PUBLISHED, THEY SHOULD BE AVAILABLE ON OPEN FILE. MORE STRUCTURAL SYMBOLS, STRIKE AND DIP, WOULD GREATLY IMPROVE MOST GEOLOGICAL MAPS EVEN THOSE AT SMALL SCALES. USERS WOULD HAVE A MUCH BETTER IDEA WHICH OUTCROPS HAD ACTUALLY BEEN VISITED.
- 0407 JE PROFITE DE L'OCCASION POUR FAIRE QUELQUES COMMENTAIRES - HORS QUESTIONNAIRE - SUR LE ROLE DU CONSEIL GEOSCIENTIFIQUE CANADIEN, ET EN TANT QUE DIRECTEUR DE PUBLICATIONS DU BULLETIN GEOLOGIQUE DE L'ASSOCIATION DES GEOLOGISTES DU QUEBEC. AVANT TOUTE CHOSE, JE DOIS SOULIGNER LA HAUTE TENUE SCIENTIFIQUE DES ARTICLES ET PUBLICATIONS QUI PARAISSENT SOUS L'EGIDE DU CONSEIL, MAIS JE DOIS SOULIGNER AUSSITOT TROIS POINTS QUE L'ON DEVRAIT CONSIDERER
 - ESSAYER D'INVENTER UN NIVEAU DE VULGARISATION DES ARTICLES
 - NOTAMMENT SUR CERTAINS SUJETS QUI POURRAIENT INTERESSE

UN PLUS LARGE PUBLIC.

- ESSAYER D'ACTUALISER LES PUBLICATIONS PAR ITEMS
ENERGIE, METALLOGRAPHIE, ETC.

- ESSAYER D'IMPLIQUER, AVEC CONVICTION, LES CHERCHEURS
CANADIENS FRANCAIS EN LES INCITANT: A PUBLIER DANS LEUR
LANGUE; A LES FAIRE PARLER DE LEURS TRAVAUX. L'EFFORT,
IL FAUT BIEN LE DIRE, EST LOUABLE DANS CERTAINS CAS,
MAIS CES EFFORTS SONT PARFOIS TROP PARTIELS. LE PROBLEME
NE ME PARAÎT PAS ETRE AU NIVEAU DE LA QUALITE DES
SERVICES - IL SONT TRES BONS - MAIS DE LA PERTINENCE DES
PUBLICATIONS D'UNE PART ET, D'AUTRE PART, DE LA
CONNAISSANCE DES STRUCTURES INFORMATIVES DU CONSEIL. JE
DIRAI QUE CES SERVICES ME PARAÎSENT SOUVENT DISCRETS.

- EXISTENT-ILS DES RESEAUX D'ECHANGES ENTRE CHERCHEURS
SUR LE PLAN NATIONAL?

- AVONS-NOUS LES MOYENS DE CREER DE TELS RESEAUX ET D'EN
ASSURER LA DYNAMIQUE CREATIVE? FELICITATIONS POUR VOTRE
EXCELLENT FORMAT|

THE FOLLOWING CRITERIA WERE USED FOR SELECTING QUESTIONNAIRES
TO BE INCLUDED IN THIS REPORT:

UNIVERSITY GEOSCIENCE DEPTS.

FORM NUMBERS: "0600 " THRU "0645 "
 "0647 "

THIS REPORT PRODUCED -

APR 7, 1981

SECTION B: INTERESTS.

SECTION B2

- 0611 12 FACULTY, 4 POST-DOCS ETC., 25 GRAD STUDENTS, 60 STUDENTS MAJORING IN GEOLOGY IN YEARS 2, 3 AND 4.
- 0619 16 STAFF MEMBERS, 50 GRADUATE STUDENTS. TEACHING & RESEARCH IN ALL AREAS OF CANADA.
- 0641 EXCLUDING STUDENTS; OTHERWISE ADD 100 FOR MAJORS. RE B-4 I'VE INCLUDED AREAS WHERE VARIOUS FACULTY HAVE ACTIVE RESEARCH PROGRAMMES.

SECTION B4

- 0609 ALL ARE "OF INTEREST", BUT THE AREAS OF CONCENTRATED INTEREST ARE: WESTERN CORDILLERA, WESTERN SEDIMENTARY BASIN, PRECAMBRIAN SHIELD AND APPALACHIAN REGION.

SECTION B

- 0601 BEAR PROVINCE M/M HISTORY/BEAR/SLAVE TECTONICS S.W. CHURCHILL PROVINCE-EVOLUTION OF WEST PART OF SHIELD SCOTLAND, ALPS AND HIMILAYAS.
- 0604 PACIFIC MARINE GEOLOGY, OCEANOGRAPHY AND CORDILLERAN GEOLOGY THE MAIN REGIONAL FOCUS.
- 0606 I AM RESPONDING FOR A UNIVERSITY GROUP OF OCEANOGRAPHERS.
- 0614 EARTH SCIENCE TEACHING AND RESEARCH MOST RESEARCHES WITHIN THE DEPARTMENT ARE CONCERNED WITH THE EASTERN HALF OF THE COUNTRY WITH THE EXCEPTION OF THE MARITIMES.
- 0618 ALSO UNIVERSITY RESEARCH.
- 0621 I AM TRYING TO ANSWER FOR THE DEPARTMENT AS BEST I CAN.
- 0623 INTERESTS OF OUR GROUP EXTEND OUTSIDE NORTH AMERICA - E.G. NORTHWESTERN EUROPE, INDIA.
- 0624 AS AN EDUCATIONAL TOOL, GSC PUBLICATIONS ARE USED FROM WHEREVER THEY ARE AVAILABLE, RIGHT ACROSS CANADA. FOR

RESEARCH, THE SCOPE IS MORE RESTRICTED. B-2 SHOULD INCLUDE STUDENTS WHO DO: A) BIBLIOGRAPHIC RESEARCH (UNDERGRADUATE); B) USE THE DOCUMENTS EXTENSIVELY IN THEIR RESEARCH AT THE MASTER'S AND DOCTORATE'S LEVEL. THE NUMBER THEN SHOULD CORRECTLY BE = 40-50.

0625 AS TEACHERS WE CANNOT BE VERY PAROCHIAL. HOWEVER THERE IS A DOMINANCE OF INTEREST IN THE GEOLOGY OF THE NORTHERN APPALACHIAN REGION AND THE ATLANTIC OFFSHORE AREA BECAUSE OF THE GEOGRAPHICAL SITUATION OF THE UNIVERSITY. PERSONAL RESEARCH INTERESTS HOWEVER, INCLUDE THE ARCTIC ISLANDS AND PLACES OUTSIDE CANADA (EG SCOTLAND). N.B. AS A REPOSITORY OF GSC PUBLICATIONS AND MOST PROVINCIAL PUBLICATIONS WE FIND THAT THESE ARE USED NOT ONLY BY STAFF AND STUDENTS OF THE UNIVERSITY BUT ALSO BY THE PUBLIC AND BY INDUSTRY WHEN WORKING IN THIS AREA.

0632 RESEARCH

SECTION C: NATURE OF USE OF GSC OUTPUT.
-----**SECTION C1**

0611 DON'T KNOW: LIBRARY MAY.

SECTION C3

0614 (A) (SOMEWHERE IN BETWEEN FOR THE DEPARTMENT AS A WHOLE).

0621 (B) IN OUR CASE "NONE" MEANS "RARELY".

0625 ITS VERY DIFFICULT TO HAVE A CONSENSUS ON THE DEGREE OF USE -TAKE THE HEAVIEST NUMBER OF TICKS IF YOU LIKE.

0640 (A) DO YOU MEAN THE SAME DOCUMENT (MANY TIMES) OR MANY DIFFERENT DOCUMENTS AT LEAST ONCE.

SECTION C4

0625 SEE NOTE ON C-3 "CONSENSUS" OF 4 PEOPLE.

0640 (A) IN OPEN LITERATION. IF YOU MEAN THIS ITS' POINTLESS, AND IF YOU DON'T MEAN IT WHAT THE HELL DOES IT MEAN.

SECTION C5

0621 (B) RARELY.

SECTIONS C1 TO C5

0601 REGIONAL COMPILATION MAPS OF 1:1 MILLION SERIES ARE EXCELLENT EDUCATIONAL MATERIAL. THE GRAPHICS AND REPRODUCTION ARE OUTSTANDING. THESE MAPS ALSO ARE THE BEST AVAILABLE REFLECTION OF 'THE STATE OF THE ART' IN REGIONAL GEOLOGIC SYNTHESIS. WE CONSIDER THE SURVEY

PUBLICATIONS TO BE OUR PRIMARY DATUM REFERENCE FOR GEOLOGICAL INFORMATION ON CANADA. OTHER PUBLICATIONS THEN SIT IN PERIPHERAL FASHION TO THAT BODY OF DATA. WE USE TERMINOLOGY WITHIN THE SURVEY DEFINITION AS MUCH AS POSSIBLE. I OCCASIONALLY USE GSC PUBLICATIONS AS A 'SOURCE OF IDEAS', BUT IN MY FIELD, THEY ARE SELDOM FULL OF IDEAS. SHORTAGE OF MAPS A REAL DRAWBACK.

- 0611 WHAT DOES SPECIAL DATA MEAN. GSC PEOPLE USUALLY PUBLISH IDEAS IN EXTERNAL PUBLICATIONS. WRITTEN OR VERBAL CONTACT WITH B10-AGC STAFF.
- 0614 FROM TIME TO TIME WE CONSULT WITH GSC PERSONNEL.
- 0619 THESE ANSWERS WERE PREPARED BY A GROUP OF MEMBERS OF THE DEPARTMENT BUT ARE PROBABLY OF DOUBTFUL VALIDITY AS REPRESENTATIVE OF THE WHOLE STAFF.
- 0621 OF COURSE, THERE ARE EXCEPTIONS BUT I DOUBT THAT MEMBERS OF ANY DEPARTMENT REGULARLY REFER TO MEMOIRS, BULLETINS OR PAPERS FOR IDEAS - THEY MAY BE THERE, BUT WE DON'T LOOK THERE FOR THEM. IF THE IDEA IS GOOD WE EXPECT TO SEE IT PUBLISHED IN THE REGULAR SCIENTIFIC JOURNALS.
- 0624 ON THE AVERAGE, THE ANSWERS TO C-3 SHOULD ALL BE MOVED BY ONE TO THE LEFT OWING TO THE NUMBER OF PERSONS INVOLVED AT THE "EDUCATIONAL" LEVEL. IN CERTAIN COURSES (UNDERGRAD) THE STUDENTS ARE REQUIRED TO CONSULT GSC PUBLICATIONS. IN OTHERS, THEY ARE LEAD TO CONSULT THEM.
- 0629 DOUBLE USAGE INDICATED BECAUSE OF GROUP RESPONSE, IN EFFECT ALMOST EVERY CATEGORY COULD BE CHECKED UNDER EDUCATIONAL.
- 0633 USAGE PATTERN BASED ON USE BY STAFF AND STUDENTS IN GEOLOGY LIBRARY.
- 0640 C-3(C) - DON'T USE DATA TAPES BECAUSE I REFUSE TO PAY THE COST (800.00 FOR ONE TAPE AT LAST REQUEST) WHICH IS OBVIOUSLY BASED ON RECOVERING THE COMPLETE SURVEY COST. SINCE YOU HAVE ALREADY DONE THE SURVEY ON MY MONEY, THE COST OF THE TAPE SHOULD REFLECT ONLY THE COST OF THE MATERIAL (I.E. ABOUT (\$40.00)).
- 0641 ALL FORMS OF DATA ARE USED IN CLASSROOM AND LABORATORY INSTRUCTION I.E. EDUCATIONAL. MOST FORMS ARE USED IN PLANNING OR EXECUTING VARIOUS RESEARCH PROJECTS.

SECTIONS C6 TO C7

- 0609 C-6 AND C-7 ARE ANSWERED AFFIRMATIVELY, IN THAT THOSE WHO ARE PAID A SALARY TO TEACH GEOLOGY DRAW HEAVILY FROM GSC MATERIALS FOR REFERENCE.
- 0618 C-6 AND C-7 WOULD BE YES IF INDIVIDUAL CONSULTING WERE INCLUDED - BUT IT SHOULD NOT BE IN A DEPARTMENT RESPONSE.

SECTION C8

- 0604 WE DO NOT RUN AN ECONOMY - CONTROLLED EDUCATIONAL OPERATION.
- 0611 WE HAVE NO MONEY TO DO THE GSC'S WORK FOR THEM.
- 0614 BEDROCK AND SURFICIAL GEOLOGY MAPS ARE ESPECIALLY VALUABLE IN SOIL SURVEY AND WOULD BE BEYOND OUR SCOPE TO PROVIDE IF THEY WERE NOT PROVIDED FOR US.
- 0619 CANNOT ANSWER.
- 0621 MAPS, REGIONAL STUDIES AND COMPILATIONS.
- 0623 MAPS AND MEMOIRS INDISPENSABLE FOR REFERENCE IN RESEARCH AND TEACHING.
- 0625 ONE APPARENTLY DOES - 3 DO NOT. COMMENT: IF THEY COULD NOT BE REPLACED THE COST OF REPLACING THEM WOULD BE EITHER NIL OR EXTORTIONATE DEPENDING ON HOW MUCH TIME WAS WASTED BEFORE THE IMPOSSIBILITY OF REPLACEMENT WAS REALIZED. THE ABSENCE OF CERTAIN TYPES OF PUBLICATIONS WOULD BE A GREAT INCONVENIENCE - BUT DIFFICULT TO MEASURE IN DOLLARS.
- 0626 THE BASIC DATA PROVIDED ON GEOPHYSICAL DATA IS PARTICULARLY VALUABLE TO SOME. "MOST OPERATIONS COULD BE BETTER CARRIED OUT IN PRIVATE SECTOR AND BY UNIVERSITIES". "VALUABLE BASIC KNOWLEDGE". "G.S.C. MAPS, ETC. WHEN OUT OF PRINT CANNOT BE READILY REPLACED".
- 0628 USE OF MAPS AND PUBLICATIONS IN TEACHING AND RESEARCH.
- 0632 REGIONAL COMPILATIONS, BULLETINS, PAPERS, ETC.
- 0634 MAPS, REPORTS, MEMOIRS, ETC.
- 0640 MAPS.

- 0641 RE C-6 AND C-7 DATA OCCASIONALLY INVOLVED IN MINOR AMOUNTS OF CONSULTING WORK.
RE C-8 - DATA OUTPUT EG. GEOLOGIC MAPS, GEOPHYSICAL MAPS COULD NOT BE REPLACED.

SECTIONS C6 TO C8

- 0601 UNIVERSITIES NOT IN A POSITION TO DUPLICATE IN THE REGIONAL ASPECTS OF GSC ACTIVITIES. MAP COMPILATIONS, MEMOIRS, PERSONAL CONTACTS, AND FOR IDEAS ON THE CURRENT RESEARCH PUBLICATIONS. BEDROCK MAPPING AND REGIONAL COMPILATIONS. MAPS, REPORTS ETC. -AS SOURCES OF INFORMATION. BASIC MAPPING AND STRATIGRAPHIC WORK DONE BY THE G.S.C. ENORMOUSLY MINIMIZE THE AMOUNT OF FIELD EFFORT NEEDED TO FIND AND STUDY THE DISTRIBUTIONS OF FOSSILS. SURFICIAL AND BEDROCK GEOLOGY MAPS OF LARGE PARTS OF THE COUNTRY ARE INADEQUATE. BASIC 1:250,000 REGIONAL MAPS, REPORT OF ACTIVITIES. ALL MEMOIRS, MAPS, BULLETINS, PAPERS. BULLETINS, MEMOIRS, PAPERS, MAPS. MAPS UNDER C-8.

SECTION C9

- 0601 COMMENTING AS A TEACHER-"YOU CAN'T REPLACE THE FIELD AND RESEARCH SURVEY OF THE GSC, UNLESS YOU HIRED THE WHOLE SURVEY. PROBABLY IMPOSSIBLE. UNIVERSITIES COULD CARRY OUT GSC WORK IF THEY HIRED A GREAT NUMBER OF ADDITIONAL STAFF AND WERE SUPPLIED WITH A LOT OF MONEY TO SUPPORT THEM IN THE FIELD. ACADEMIC FREEDOM OF INDIVIDUALS WOULD CAUSE A CONSIDERABLE PROBLEM IN CO-ORDINATION OF EFFORT, HOWEVER.
- 0604 NOT APPLICABLE.
- 0609 C-9 IS SURELY MEANINGLESS WITHOUT ASKING WHAT PERCENTAGE OF GSC OUTPUT NORMALLY USED COULD BE REPLACED FROM OTHER SOURCES BY THE RESPONDENT? THE PERCENTAGE FOR MOST UNIVERSITIES MUST REALISTICALLY BE CLOSE TO 0%.
- 0611 I HAVE NO IDEA. UNIVERSITIES DON'T FUNCTION IN THIS WAY.
- 0618 NEGLIGIBLE AMOUNT.
- 0619 THE COST INVOLVED WOULD BE THAT OF THE PROVINCIAL SURVEYS TAKING OVER THE WORK OF THE G.S.C.

- 0621 AS FAR AS UNIVERSITIES ARE CONCERNED G.S.C. OUTPUT IS
SIMPLY IRREPLACEABLE - UNIVERSITIES NEITHER SHOULD DO
THIS WORK, NOR COULD THEY DO IT.
- 0623 FOR MUCH OF THE MATERIAL WE USE THERE SIMPLY IS NO OTHER
SOURCE. IT IS DIFFICULT TO PUT A PRICE TAG ON
ALTERNATIVE SOURCES EVEN IF THEY WERE AVAILABLE.
- 0624 IS NOT APPLICABLE AT ALL; IT IS UNTHINKABLE, OF COURSE.
- 0626 "LITTLE VALUE FOR PUBLIC FUNDS IN SOME SECTORS OF
G.S.C."
"CAN'T REPLACE".
- 0629 NOT APPLICABLE.
- 0632 NOT APPLICABLE TO OUR UNIVERSITY NEEDS.
- 0633 STAFF \$(LIBRARY) 15,000 CONSULTANT SERVICES\$
- 0641 HIRING MORE STAFF WOULD BE OUT OF THE QUESTION; WE WOULD
HAVE TO RELY ON DATA FROM OTHER AGENCIES EG. PROVINCIAL
SURVEYS AND STATE SURVEYS FOR EDUCATIONAL EXAMPLES, AND
TO RECAST OUR RESEARCH PROJECTS WITHIN EXISTING BUDGETS.

SECTION D: COVERAGE, RELEVANCE, TIMELINESS, AND ACCURACY.

SECTION D1

- 0641 (B) SEVERAL MAP AREAS DONE IN THE '60'S NOT YET PUBLISHED EG. COAST RANGES
 (C) RELY MOSTLY ON PROVINCIAL SURVEY DATA.
 (G) COVERAGE SPOTTY, VARIABLE METHODS OF NOMENCLATURE, MANY MAP AREAS DON'T COME OUT FOR YEARS (IF EVER|)
 (H) SURFICIAL DATA GOOD BUT SUBSURFACE NEGLIGIBLE
 (J) LOW LEVEL PROGRAMME PERFORMING ADEQUATELY

SECTION D2

- 0619 G(III) SO MUCH TIME AND MONEY IS SPENT DOING RESOURCE SURVEYS THAT PERSONNEL INVOLVED ARE ANTAGONIZED. VERY LITTLE RESULTS FROM THESE EXTENSIVE SURVEYS.
 (M) SOME QUESTION AS TO WHETHER DETAILED PETROLOGIC STUDIES WERE THE MANDATE OF THE SURVEY, I.E. IS THE SURVEY A RESEARCH INSTITUTE OR A SURVEY".
 P(I) GENERALLY AGREED THAT SURVEY DOES NOT DO ENOUGH DETAILED MAPPING AND THAT PERSONNEL ENGAGED IN RESOURCE SURVEYS AND IN SPECIAL PROJECTS WOULD BE BETTER EMPLOYED MAPPING.
- 0641 (A) FEDERAL OUTPUT BARELY VISIBLE IN THIS AREA.
 (B) REGIONAL MAGNETIC DATA EXCELLENT BUT LACK OF ANY AIRBORNE REGIONAL COVERAGE IN OTHER AREAS OF GEOPHYSICS EG. EM IS TRAGIC
 (F) VERY LITTLE OUTPUT APPARENT BUT GENERALLY GOOD CALIBRE
 (G)II NEGLIGIBLE OUTPUT
 (H) THIS LAB WAS STATE OF THE ART "IN 1965-70; DURING 70'S OUTPUT NEGLIGIBLE AND METHODS TECHNICALLY OBSOLETE.
 (I) C14 LAB DOES SOLID WORK AND REPORTS STEADILY, BUT NEW METHODS NOT BEING DEVELOPED.
 (J) LAB BARELY ACTIVE AND LITTLE DONE IN CORRELATION
 (M) PETROLOGIC WORK GOOD ON BASIC THIN SECTION TYPE STUDIES AND CLASSIFICATION CONCEPTS THEORETICAL HIGH TEMP AND PRES. WORK DOESN'T EXIST
 (N) SOME GOOD STUDIES FROM THE INST. IN CALGARY BUT NO EFFORT IN SOME AREAS EG. SASKATCHEWAN
 (O) SOME EXCELLENT WORK SUCH AS THE SOUTHERN ROCKIES, NEWFOUNDLAND, CORDILLERA, GREAT SLAVE AREA; MUCH OF IT DONE BY ACADEMICS UNDER SHORT TERM CONTRACTS RATHER THAN BY SURVEY PERSONNEL
 (P) MAPPING SUFFERS FROM VERY SLOW PUBLICATION RATES OF MAPS (SHOULD GO TO FEW MONTH "MUST" SYSTEM SIMILAR TO OGS FOR PRELIMINARY MAPS) AND THE FACT THAT MANY AREAS

NEVER GET PUBLISHED AFTER MAPPING BECAUSE OF FAILURE OF SOME SURVEY OFFICERS TO GET THEIR MAPS OUT FOR YEARS.

SECTION D

- 0601 DELAY IN RELEASE OF 1:250,000 MAPS HAS BEEN FRUSTRATING IN PAST. IT IS DESIRABLE THAT OPEN FILE COPY? BE AVAILABLE WITHIN A YEAR AND FINAL PUBLISHED 'A' SERIES MAPS WITHIN 5 YEARS (MAXIMUM). STRUCTURE AND TECTONICS IS HIGHLY SHOT THROUGH WITH SPECULATION. THE INDUSTRY SOURCE IS MUCH MORE RELIABLE. ENERGY RESOURCE APPRAISALS ARE USING CRITERIA 10 YEARS OR MORE OUT OF DATE. DETAILED MAPPING AND COMPILATIONS IN THE ROCKY MOUNTAIN FOOTHILLS SEEMS TO HAVE FALLEN OFF IN LATE YEARS. ONE OF THE GSC'S MAJOR COMMITMENTS IS THE IDENTIFICATION AND MAPPING OF NATURAL HAZARDS. BUT THERE ARE 3 PEOPLE ONLY ON THE GSC STAFF IN WESTERN CANADA WHO ARE INTERESTED IN THIS AREA. THEIR PUBLISHED WORK IS GENERALLY OF QUITE A HIGH STANDARD BUT THE PROGRAM IS INADEQUATE. SURFICIAL AND BEDROCK MAPPING AS A BASIS FOR ENGINEERING STUDIES IS INADEQUATE IN QUANTITY AND PUBLICATION IS DELAYED. LOG TIMES BETWEEN FIELD WORK AND THE PUBLICATION OF THE SUMMARY DOCUMENT (MAPS IN PARTICULAR) CAN BE EXCESSIVE (I.E. GREATER THAN 8 YEARS). GEOCHEMICAL SURVEYS ARE TOO SPORADIC, NON-SYSTEMATIC PRECAMBRIAN SHIELD STUDIES ARE TOO LIMITED. LEADERSHIP MOSTLY IN UNIVERSITIES OR PROVINCIAL SURVEYS. PUBLICATIONS HORRIBLY SLOW. COLLABORATION ONLY JUST BEGINNING TO PICK UP. RADIOMETRIC DATING LAB OUT OF DATE. PETROLOGIC STUDIES ON MUCH TOO SMALL A SCALE. FAR TOO FEW DETAILED MAPS PUBLISHED. MAY REGIONAL MAPS ARE NOW DATED: REVISION RATE TOO LOW.
- 0609 ONLY AREAS OF PRINCIPAL INTEREST ARE EVALUATED.
- 0614 CATEGORY (A) IN D2 APPEARS TO BE THE ONLY ONE TO FIT OUR MAJOR USE, WHICH IS AS A BASIS FOR SOIL SURVEY.
- 0619 FOLLOWING COMMENTS WERE MADE BY STAFF MEMBERS.
- 0621 I CANNOT POSSIBLY ANSWER THIS SECTION FOR 12 FACULTY.
- 0623 RELIABLE RADIOMETRIC (AND SECONDARILY, FOSSIL) DATES, AND MAPS (ESPECIALLY 1:50,000) ARE OF KEY IMPORTANCE TO SOME BRANCHES OF OUR RESEARCH. THESE ITEMS FROM GSC ARE GENERALLY OF HIGH QUALITY, BUT RADIOMETRIC DATES ARE OFTEN NOT AVAILABLE. THE SAME APPLIES TO GOOD GEOLOGICAL MAPS IN SOME AREAS OF CRITICAL INTEREST. MAPPING A BIG COUNTRY AT 1:50,000 CAN ONLY BE AFFORDED AT A SLOW PACE, BUT PERHAPS A MORE CRITICAL LOOK AT CURRENT MAPPING

PRIORITIES, WITH A VIEW TOWARDS SPECIAL GEOPHYSICAL NEEDS, COULD BE CONSIDERED.

- 0624 CANNOT HONESTLY ANSWER EITHER OF THE QUESTIONS. IT WOULD, HOWEVER, BE IN THE REGION OF
 A = 3
 B = 1 TO 2 IN RESEARCH; 3 TO 4 IN EDUCATION
 C = 5
 D = 1 TO 5 DEPENDING,
 FOR MOST OF THE QUESTIONS.
- 0626 STILL A NEED FOR BASIC MAPPING. GENERAL FEELING IS THAT BEDROCK GEOLOGY OF NEW BRUNSWICK IS INADEQUATELY COVERED. ABOLISHMENT OF APPALACHIAN SECTION IS REGRETTEED AND THERE IS GENERAL FEELING THAT IMPUT INTO APPALACHIANS IS INADEQUATE. SPECIFIC MENTION OF LACK OF MICROPALAEONTOLOGY OF APPALACHIAN PALAEOZOICS. LACK OF G.S.C. PUBLICATIONS IN ICHNOLOGY ALSO SINGLED OUT.
- 0628 THIS SECTION IS DIFFICULT TO ASSESS. WE PREFER TO LEAVE IT BLANK.
- 0629 THE WHOLE QUESTIONNAIRE SHOWS RELATIVELY LITTLE STRESS ON THE CANADIAN SHIELD, WHICH COMPRISES ABOUT 1/2 OF CANADA, AND IS THE LARGEST SOURCE OF FUTURE MINERAL RESOURCES. THE CANADIAN SHIELD IS VERY POORLY KNOWN COMPARED TO THE OTHER GEOLOGICAL UNITS OF CANADA, AND RESEARCH ON IT HAS BEEN RELATIVELY NEGLECTED (NOT ONLY BY THE GSC).
- 0632 MARGINAL AND POOR SCORES RELATE TO THE RELATIVELY LITTLE WORK DONE BY GSC IN SASKATCHEWAN, NOT TO QUALITY OF OUTPUT.
- 0633 MOST GSC DOCUMENTS IN STRATIGRAPHY THAT ARE IMPORTANT ARE OLD ONES, PROVIDING GOOD REGIONAL INFORMATION. NOT MANY CONTRIBUTE MUCH OF VALUE TO LABORATORY ORIENTED SEDIMENTOLOGISTS. THIS PART OF THE QUESTIONNAIRE WAS THE MOST DIFFICULT TO RESPOND TO. THERE IS NO WAY IN WHICH ONE CAN, FOR INSTANCE, EXPRESS THE VARIABILITY IN QUALITY OF DOCUMENTS IN ONE FIELD OR IN ONE REGION; SOME REPORTS ARE EXCELLENT, OTHERS NOT SATISFACTORY. AVERAGE RATINGS HAVE BEEN GIVEN ABOVE IN SEVERAL INSTANCES BUT THESE ARE NOT VERY MEANINGFUL. ALSO MANY ENTRIES HAVE BEEN LEFT BLANK ON ACCOUNT OF FINDING SOME STAFF MEMBER WILLING AND CAPABLE OF PROVIDING SOME REASONED ANSWERS.
- 0640 THIS IS GETTING TOO GODDAM LONG.

SECTION E: FORMAT OF PUBLICATIONS.

SECTION E1

- 0601 (B) SMALL ITEMS IN CURRENT RESEARCH ARE DIFFICULT TO KEEP UP WITH AND SOON WILL BE LOST, BURIED UNDER LATER LITTLE PAPERS. ONLY 1:50,000 MAPS ARE USEFUL FOR SITE IN INVESTIGATIONS. MORE OF THE BASIC DATA SHOULD BE PUBLISHED RATHER THAN SUMMARY TABLES.
- 0611 (A) JUST FINE.
(B) FORMAT OK, BUT SPEED OF PUBLICATION SLOW SOMETIMES.
- 0619 (A) THESE PUBLICATIONS ARE ONLY TOO ELABORATE IF THEY TAKE TOO LONG TO COME OUT FOR THAT REASON ALONE.
(B) CANNOT BE ANSWERED FOR A DEPARTMENT.
1:50,000 MAPPING SEEMS TO HAVE STOPPED IN S. QUEBEC AND MAPS AVAILABLE ARE OBSOLETE. SURVEY SHOULD SOLVE THE POLITICAL QUESTION OF ITS OBLIGATION TO MAP ALL OF CANADA IN DETAIL. UNFORTUNATELY, THE PROVINCES HAVE NOT ALWAYS FILLED THE GAP OF THE SURVEYS DEPARTMENT FROM THE MAPPING FIELD.
- 0623 (A) ONE OF OUR RESPONDENTS RATED THESE AS ONLY 'ACCEPTABLE'. ANOTHER NOTED THAT PARTICULAR PUBLICATIONS ARE OCCASIONALLY THE WRONG LENGTH FOR THEIR FORMAT, OR POORLY WRITTEN.
(B) ONE OF OUR RESPONDENTS RATED THE ABOVE ITEMS AS ONLY 'ACCEPTABLE'.
- 0626 (B) "BEDROCK GEOLOGY 1:50,000 G.S.C. MAP COVERAGE INCOMPLETE" "BEDROCK GEOLOGY 1:250,000, 1 1,000,000 MAPS NON EXISTENT?"
- 0628 CURRENT RESEARCH OFTEN TOO DETAILED.
(B) VARIES.
- 0641 (A) THE FORMATS AND STANDARDS OF ALL PUBLICATIONS ARE SUITABLE, IF THEY WERE ONLY PUBLISHED (MEMOIRS, BULLETINS AND ECON. GEOL. SERIES) WITHIN A REASONABLE TIME FRAME.
(B) SAME COMMENT AS ABOVE, ALTHOUGH SOME OF THESE EG. AEROMAGNETIC SERIES DO COME OUT RELATIVELY RAPIDLY.

SECTION E4

- 0601 A VERY KNOWLEDGEABLE EDITOR WOULD HAVE TO MAKE THE DISCRIMINATION. NOT NOW, BUT WILL BE IN 10 YEARS TIME. IF HARD COPY CAN BE OBTAINED READILY. THE MORE AND

SOONER THE BETTER.

- 0611 MICROFICHE ONLY AVAILABLE IN LIBRARY AND IS VERY INCONVENIENT TO USE. WE USE COMPUTER TAPES AT AGC.
- 0621 TERRIBLE STUFF - USE ONLY AS A LAST RESORT.
- 0623 OPINION IS DIVIDED. GENERALLY PREPARED TO ACCEPT SUCH PUBLICATION OF DATA ONLY IF SUFFICIENTLY WELL-SUMMARIZED TABLES AND/OR FIGURES ACCOMPANY THE PRINTED TEXT, SO AS TO CONVEY THE ESSENTIAL INFO. EMBODIED IN THE DATA.
- 0624 A LAST RESOURCE.
- 0626 OPINION EVENLY DIVIDED "MICROFICHE IS NOT A CONVENIENT DATA SOURCE". "SHOULD ONLY BE SUPPORTING DATA"
- 0628 HARDLY EVER USED.
- 0629 GENERALLY YES BUT LESS ACCEPTABLE AS AN EDUCATIONAL TOOL.
- 0633 COMMENT RE MICROFICHE: ALTHOUGH AT PRESENT RARELY USED, WITH THE CURRENT INCREASE IN OUR COLLECTION INCREASED USAGE IS FORESEEN.
- 0641 PROVIDED ITS AVAILABLE AT REASONABLE COST AND RAPID DELIVERY.

SECTION E5

- 0619 MAGNETIC ASSUMED.
- 0621 DON'T KNOW.

SECTION E6

- 0624 IT MAY BE THE BEST WAY TO HANDLE "TABULAR" DATA (E-4).
- 0626 "IF DATA WAS AVAILABLE FOR A PARTICULAR PROJECT I WOULD HAVE HESITATION IN USING IT IN THIS FORM".
- 0629 NOT WELL KNOWN.

SECTION E

0614 COMMENT RE MICROFICHE: YES, RELUCTANTLY, MOST OF US
PREFER THE OLD-FASHIONED BOOK BUT WE ALSO RECOGNIZE THAT
WE HAVE INCREASING STORAGE PROBLEMS.

SECTION F: ACCESS.
-----**SECTION F1**

0611 GOVERNMENT LIBRARY AT AGC.

0621 WE ALSO HAVE GSC DOCUMENTS IN OUR DEPARTMENTAL LIBRARY.

SECTION F2

0641 IT MAY BE A PROBLEM WITH OUR OWN LIBRARY, BUT I HAVE A SUSPICION THAT WE NO LONGER ARE GETTING ALL PUBLICATIONS AS WE ONCE DID.

SECTION F3

0601 I BROWSE THROUGH THE UNIVERSITY LIBRARY THAT IS COMPLETE - THEN ORDER IF PERTINENT.

0611 GSC INDICES ONLY EFFECTIVE IF YOU KNOW YOU NEED A GSC PUBLICATION. GEOREF IS OUR MAIN SOURCE OF DATA.

0619 NOT ALL DEPARTMENTAL STAFF ARE SENT THE INFORMATION CIRCULAR.

0621 GENERALIZED RESPONSE MAY BE NOT TRUE FOR ALL OF OUR DEPARTMENT.

SECTION F4

0611 WE GET BUT DON'T USE. USE GEOREF.

0621 "GET" YES, "USE" NO.

0623 OCCASIONAL USE.

0641 SUPPOSEDLY.

SECTION F

0626 "COMPUTER SEARCHES BASED ON GEOREF, ETC. ONLY USEFUL
WHEN STARTING A NEW AREA OF RESEARCH".

SECTION G: INFORMAL OUTPUT.
-----**SECTION G2**

- 0619 CAN ONLY BE ANSWERED BY INDIVIDUALS. GENERALLY SPEAKING
THE ANSWER IS "ALL OF THE ABOVE".
- 0621 DON'T KNOW.

SECTION G3

0601. SLIGHTLY QUALIFIED YES. REPRESENTATION AT CONFERENCES
ABROAD IS NOT COMMENSURATE WITH THE TOTAL SCALE OF GSC
OPERATION.
- 0609 G-3 IS A POORLY WORDED QUESTION. OUR "NO" IS INTENDED TO
INDICATE THE RECENT DRASTIC REDUCTION IN GSC SUPPORT FOR
TRAVEL OF PERSONNEL TO CONFERENCES. WE DO NOT MEAN THAT
THOSE WHO DO STILL ATTEND CONFERENCES AS GSC
REPRESENTATIVES ARE POOR CONTRIBUTORS |
- 0618 BECAUSE OF GOVERNMENT TRAVEL POLICY.

SECTION G4

- 0601 IN HOUSE PUBLICATIONS TEND TO BE ABBREVIATED REPORTS
RATHER THAN THE ANALYTICAL PAPERS NECESSARY FOR OUTSIDE,
REFERRED PUBLICATIONS.
- 0621 I WOULD EMPHASIZE THAT SO MUCH LITERATURE APPEARS IN THE
REGULAR JOURNALS THAT UNIVERSITY PEOPLE TEND TO READ
JUST A SELECTION OF THAT MATERIAL. IF GSC PEOPLE (OR
OTHERS) DO NOT PUBLISH IN THE REGULAR JOURNALS, THEIR
WORK WILL BE NEGLECTED.
- 0640 IT'S THE ONLY WAY TO MAKE IT RESPECTABLE.

SECTIONS G1 TO G4

- 0601 ATTENDANCES AT CONFERENCES OF SOME GSC PERSONNEL IS
EXCELLENT AND OF OTHERS IS ABYSMAL. SOME SCIENTIFIC

PERSONNEL OF HIGH RANK IN THE GSC ARE NEVER SEEN AT CONFERENCES. ON BALANCE, GSC ATTENDANCE AT CONFERENCES IS GOOD, BUT NOT AS GOOD AS IT COULD BE. THE OUTSIDE PUBLICATIONS ARE OFTEN INADEQUATELY INDEXED AND DIFFICULT TO TRACK DOWN THROUGH THE GSC'S CATALOGUING SYSTEM.

- 0614 G-4 - PROBABLY AN EXCELLENT POLICY IN THAT GSC WORK IS SUBJECTED TO A REFEREE SYSTEM INDEPENDENT OF THE INTERNAL ONE - AND THEREFORE ONE ASSUMES LESS INCESTUOUS.
- 0623 OPINION DIVIDED ON THE ANSWER TO G-3, BETWEEN "YES" AND "NO".
- 0624 G-1 = ON THE AVERAGE = 2 RATHER THAN 1. G-4 = SOMETIME THE BEST WAY TO GET CERTAIN IDEAS OUT EFFECTIVELY.
- 0626 G4 "SHOULD NOT DETRACT FROM G.S.C. OBJECTIVES".
G4 "MUCH OF INFORMATION IS NOT ACCEPTABLE FOR SCIENTIFIC JOURNALS THUS OUTSIDE PUBLICATION WILL NOT ELIMINATE NEED FOR IN-HOUSE PUBLICATION".
- 0629 MORE INFORMAL COMMUNICATION IS ESSENTIAL TO PROVIDE SUMMER EMPLOYMENT FOR OUR STUDENTS - WE DO NOT BELIEVE IN BUREAUCRACY|
- 0641 INTERACTION WITH GSC PERSONNEL AT MEETINGS IS PROBABLY OUR MOST IMPORTANT CONTACT AND THESE ARE OFTEN FOLLOWED UP BY MAIL OR TELEPHONE. SOME OF THE TREASURY BOARD RULES CONCERNING ATTENDANCE AT MEETINGS ARE ABSURD - IE. LIMITS PLACED ON THE NUMBER OF PARTICIPANTS RATHER THAN ON THE REAL COSTS OFTEN PREVENT GSC OFFICERS FROM ATTENDING THE MOST RELEVANT MEETINGS IN FAVOUR OF MORE DISTANT AND LESS RELEVANT MEETINGS.

SECTION H: CURRENT RESEARCH AND NEW DIRECTIONS.
-----**SECTION H1**

0621 BUT I SUSPECT NOT EVERYONE IS.

SECTION H2

0621 THIS IS GENERALLY TRUE - GETTING CANADIAN GEOLOGISTS TO COMMENT IN PRINT IS LIKE PULLING TEETH.

0640 (F) TOO DULL.

SECTION H3

0601 SPEED UP PUBLICATION TIME-DELAYS OF 4-5 YEARS NO ACCEPTABLE. ANY PRODUCTIVE INNOVATIONS WOULD BE USEFUL. THE AMBITION TO BE ONE OF THE WORLDS LEADING ORGANIZATIONS IN BOTH QUALITY AND QUANTITY OF OUTPUT IN THE MINERALOGICAL, PETROLOGICAL AND GEOCHEMICAL SCIENCES. MORE RAPID PUBLICATION OF DATA. MORE CONCENTRATION ON BASIC INVENTORY TO PRODUCE ADEQUATE MAPS OF THE COUNTRY AT 1:50,000 SCALE. MORE CO-OPERATION WITH PROVINCIAL AND UNIVERSITY STAFF. FUNDS TO SUPPORT UNIVERSITY STAFF IN THE SUMMER ARE WELL SPENT ON ACTIVE RESEARCHERS WHO DON'T HAVE LARGE SUPPORT COSTS. GSC SHOULD PUBLISH LISTS OF PROJECTS IT WOULD LIKE TO SEE RESEARCH PROPOSALS ON. THE GEOLOGY AND ECONOMIC MINERALS OF CANADA IS TOO BULKY AND DATED FOR SOME PARTS OF THE COUNTRY WHERE KNOWLEDGE IS ADVANCING QUICKLY. SMALLER PAPERBACKS COMPARABLE TO THE BRITISH HANDBOOKS OF REGIONAL GEOLOGY SHOULD BE PUBLISHED, PERHAPS BASED ON REVISIONS OF CHAPTERS IN THE MAIN COMPILATION AND AIMED AT ABOUT THE SAME LEVEL. MORE MAPPING. THE RESTORATION OF THE OLD SUMMARY REPORTS AS THE 'CURRENT RESEARCH' FILLED THE ONLY REAL GAP IN SURVEY COMMUNICATION, NAMELY-"WHAT'S GOING ON".

0614 I WOULD LIKE THE GSC TO SEND SELECTED PERSONNEL ON LECTURE TOURS OF CANADIAN CAMPUSES. YOU WOULD NEED TO SELECT YOUR BEST PEOPLE (BEST NOT ONLY AS SCIENTISTS BUT AS TEACHERS). YOU MIGHT CIRCULATE A LIST OF PERHAPS 5 GEOSCIENTISTS WHO WOULD BE AVAILABLE IN ANY ONE YEAR AND WHO WOULD BE PREPARED TO SPEAK TO GENERAL STUDENTS ABOUT THE WORK OF THE SURVEY AS A WHOLE, AND TO SPECIALIST

STUDENTS ABOUT THEIR OWN WORK.

- 0619 1) MORE 1 50,000 MAPS. IT IS SUGGESTED THAT MINERAL RESOURCE PERSONNEL MIGHT BE ENGAGED IN MAPPING DEPOSITS. 2) YEARS OF FOLLOWING UP RESEARCH ON A PROJECT MAY NOT BE JUSTIFIED IN DEPLOYMENT OF PERSONNEL. (3) SOME STAFF MEMBERS WOULD LIKE TO SEE REPORTS ON MAJOR GEOLOGIC THEMES RATHER THAN AREAS BUT THIS SEEMS CONTRADICTING TO 1) & 2). AN EXAMPLE QUOTED WAS THE MUSKOX COMPLEX REPORTS: WHERE ARE THEY?
- 0621 I WOULD LIKE TO SEE THE GSC DO MORE OF WHAT IT DOES - REGIONAL GEOLOGICAL STUDIES, MAPPING, ETC. I THINK MOST PEOPLE IN MY DEPARTMENT ARE PRETTY HAPPY WITH GSC WORK AND WOULD LIKE TO SEE MORE OF IT. WHAT WE DO TEND TO CRITICIZE GSC FOR IS A CERTAIN LACK OF INTELLECTUAL EXCITEMENT - SOME OF US GET THE IMPRESSION THAT GSC SCIENTISTS COME TO BE 9-TO-5ERS (OUTSIDE OF FIELD SEASON) AND NOT MUCH CONCERNED WITH EXCITING NEW IDEAS. OF COURSE, WE ALL KNOW EXCEPTIONS, BOTH INDIVIDUALS AND GROUPS. BUT I BELIEVE OUR MAIN WORRY IS THAT EM & R SEEMS TO BE DOWNGRADING GSC IN FAVOUR OF "POLICY STUDIES". MORE SCIENCE, PLEASE, LESS POLITICS||
- 0623 WIDER CIRCULATION OF THE GSC MONTHLY INFORMATION CIRCULAR. PUBLICATION IN SOMETHING LIKE GEOLOG OF MORE ABOUT GSC ACTIVITIES AND PROGRESS.
- 0624 THOUGH UNAWARE OF H-1, H-2 WOULD BE C,D,E. (C) = CURRENT RESEARCH IS NOT FINAL, THEREFORE ANY DISCUSSION OTHER THAN BY (D) WOULD REALLY BE (E).
- 0626 "EMPHASIS ON (1) REGIONAL COMPILATION,
(2) BASIC DATA SUCH AS AGE DATING
(3) REGIONAL SYNTHESIS".
- 0641 RAPID OUTPUT OF PRELIMINARY MAPS SHOULD BE MANDATORY (SEE COMMENT ABOVE) IMMEDIATE UPGRADING OF THE RESEARCH LABORATORIES IS ESSENTIAL SO THEY ARE "STATE OF THE ART". DIVISION CHIEF AND SECTION HEAD APPOINTMENTS SHOULD BE TERM APPOINTMENTS (EG. 5 YEARS) WITH AN EXTRA STIPEND FOLLOWED BY A COMPULSORY SABBATICAL IN SOME NON-FEDERAL INSTITUTE IE. THE MANAGEMENT OF THE SURVEY IS HEAVILY WEIGHTED TO "FIELD MAPPERS" WHO ARE TIRED OF FIELD WORK. EACH SECTION SHOULD HAVE FUNDS TO DEFRAY THE "ADDED COSTS" SO THAT EACH YEAR AN INDUSTRIAL, ACADEMIC, OR OTHER NON-FEDERAL PERSON CAN BE BROUGHT INTO THE SURVEY TO WORK FOR A YEAR. THIS WOULD BROACH THE COCOON THAT NOW ENVELOPES THE ORGANIZATION. HOPEFULLY THESE IDEAS ARE ALREADY EXPRESSED IN 79-6 WHICH I HAVE NOT READ.

SECTION H

- 0628 SOME 'CURRENT RESEARCH' PAPERS ARE BECOMING TOO LONG. THEY SHOULD BE JUST PROGRESS REPORTS, WITH MORE DETAILED ACCOUNTS IN BULLETINS, JOURNAL PAPERS ETC. QUICKER OUTPUT OF BULLETINS, ETC. WOULD BE APPRECIATED.
- 0629 THE EARTH PHYSICS BRANCH SHOULD SEND A SIMILAR QUESTIONNAIRE TO USERS.

THE FOLLOWING CRITERIA WERE USED FOR SELECTING QUESTIONNAIRES
TO BE INCLUDED IN THIS REPORT:

PROVINCIAL AGENCIES A (SURVEYS AND MINES DEPTS.)

FORM NUMBERS: "0650 " THRU "0661 "

THIS REPORT PRODUCED -

APR 7, 1981

SECTION B: INTERESTS.
-----**SECTION B**

- 0652 B-3 PRESUMABLY MEANS MAIN TYPE OF BUSINESS. WE ARE ALSO INVOLVED IN EXPLORATION FOR COAL AND PEAT AND EDUCATION THROUGH PROSPECTORS SCHOOLS.
- 0653 ACTIVITIES LIMITED TO WITHIN PROVINCIAL BOUNDARIES OF MANITOBA; INTERESTS AND OBJECTIVES ENCOMPASS NEIGHBOURING PROVINCES, TERRITORIES AND STATES IN BROADER ISSUES.
- 0654B ECONOMIC GEOLOGY GROUP: METALS, INDUSTRIAL MINERALS, MINERAL POTENTIAL, RESOURCE EVALUATION, LAND USE PLANNING.
- 0661 SMILE

SECTION C: NATURE OF USE OF GSC OUTPUT.

SECTION C3

0652 DEGREE OF USE DIFFICULT TO ASSESS FOR AN ORGANIZATION. MAIN HOUSE USE PER YEAR MIGHT BE MORE REVEALING.

SECTION C5

0653 A) TECHNICAL ADVICE ON JOINT PROGRAMS; B) QUARTERLY EXCHANGE OF INFORMATION ON GSC PROGRAMMES IN MANITOBA AND FUTURE PROJECTS; C) NATIONAL GEOLOGICAL SURVEYS COMMITTEE CONTRIBUTING TO A COORDINATED GSC/MAN PROGRAMME IN MANITOBA; D) THEMATIC TRENDS OF RELEVANT PROGRAMMES IN CANADA.

SECTIONS C1 TO C5

0650 GSC DOCUMENTS ARE VITAL, PARTICULARLY MAPS. THEY CONTINUE TO BE USEFUL FOR A LONG PERIOD AS A BASIC REFERENCE - IDEAS AND DATA IN THEM BECOME INCORPORATED IN ONE'S OWN WORK SO IT IS DIFFICULT TO IDENTIFY EXACT LEVELS OF USE. SPECIALIZED REPORTS TO A SMALL AUDIENCE SUCH AS ANALYTICAL/ GEOCHEMICAL REFERENCE MATERIALS, AND METHODS; COMPUTER APPLICATIONS, PALEONTOLOGY ARE PARTICULARLY IMPORTANT AND RESULTS ARE MORE WIDELY APPLICABLE THAN IS APPARENT.

0654B THIS GROUP WORKS VERY CLOSELY WITH OPPOSITE NUMBER IN OTTAWA BOTH GSC AND CANMEX.

SECTION C8

0650 REGIONAL MAPPING WOULD HAVE TO BE ACCELERATED WITH EITHER REDUCED RESOURCE OUTPUT OR GREATER COST (STAFF).

0652 OUTPUT RELATED TO FIELD INVESTIGATIONS AND OUTPUTS FROM GEOPHYSICS AND GEOCHEMISTRY DIVISIONS.

0653 TECHNICAL EXPERTISE AND DOCUMENTATION IN AREAS OF MINERAL DEPOSIT STUDIES, METAMORPHISM, PLEISTOCENE

GEOLOGY AND GEOPHYSICAL SURVEYS.

- 0654A THE CONTINENTAL PERSPECTIVE, SOME INTERPROVINCIAL LINKING, INFORMATION ON TERRITORIAL AREAS AND PROVINCES WHICH DO NOT SURVEY EXTENSIVELY. SPECIAL SYPOSIA.
- 0654B (WE ARE GOVT. ORGANIZATION).
- 0654C IS NOT EXACTLY A CLEAR QUESTION. HOWEVER - THERE ARE MANY GSC PUBLICATIONS WHICH ARE PRIME SOURCES OF INFORMATION. SUBSTITUTES FOR THESE ARE NOT OTHERWISE AVAILABLE.
- 0656A PALEONTOLOGICAL DATA
- 0656B INTERPRETATION AND OBSERVATION IN OLDER REPORTS.
- 0656D PALEONTOLOGICAL SERVICES, GEOPHYSICAL SURVEYS.
- 0657 SEE C-3
- 0660 GEOLOGICAL MAP STUDIES ETC THAT HAVE EVOLVED OVER LAST 50 + YEARS.
- 0661 THE BEDROCK MAPS AND ACCOMPANYING REPORTS ARE INVALUABLE AND THE GSC PROGRAM TO KEEP THESE CURRENT IS HIGHLY DESIRABLE.

SECTION C9

- 0650 STAFF \$50,000 CONSULTANT SERVICES\$
COMMENT - ESTIMATED ADDITIONAL COST WOULD BE OF THE ORDER OF \$500,000 A YEAR. OTHER ASPECTS WOULD NOT BE CARRIED OUT AT ALL.
- 0651 IS IMPOSSIBLE TO ESTIMATE.
- 0652 STAFF \$60,000.00 CONSULTANT \$500,000.00.
COMMENTS:
A. TO CARRY OUT MAPPING AND METALLOGENIC STUDIES NOW PERFORMED BY GSC
B. AIRBORNE GEOPHYSICS.
- 0653 STAFF \$100,000 CONSULTANT SERVICES \$250,000.
COMMENT: TWO OR MORE ADDITIONAL STAFF WITH EXTENSIVE EXPERIENCE IN MINERAL DEPOSITS. GEOPHYSICAL CONTRACT SERVICES FOR AIRBORNE SURVEYS, BACK-UP TECHNICAL ADVICE AND FOLLOW-UP ANALYSIS OF RESULTS WOULD AVERAGE \$250,000 A YEAR OVER A 5 YEAR PERIOD.

- 0654B INTERLOCKING DATA COLLECTION AND INTERPRETATION PARTICULARLY RE URANIUM IN ONTARIO. - INTERLOCKING FIELD VISITS.
- 0654C STAFF \$100,000 CONSULTANT SERVICES \$.
THIS ESTIMATE OF \$100,000 ARRIVES 2-3 FIELD PARTIES PER YEAR TO MAP AREAS ALREADY MAPPED BY THE GSC BUT AT A SCALE MUCH SMALLER THAN BASIC OGS MAPPING (1:50,000).
- 0654 STAFF \$100,000 CONSULTANT SERVICES \$
THE INTERNAL COSTS OF REPLACING SOME GSC ACTIVITIES AT THE INTERPROVINCIAL LEVEL AND IN INTERNATIONAL PROJECTS ARE DIFFICULT TO QUANTIFY, AS THESE ACTIVITIES WOULD HAVE TO BE SHARED BY THE PROVINCES. THIS IS REALLY NOT A VIABLE OPTION IN OUR OPINION.
- 0656B DIFFICULT TO ESTIMATE.
- 0657 STAFF \$ CONSULTANT SERVICES \$X
COMMENT - VERY DIFFICULT TO SPECIFY BUT GEOPHYSICAL SURVEYS ALONE AMOUNT TO SEVERAL TENS OF THOUSANDS OF DOLLARS PER YEAR.
- 0660 STAFF \$X CONSULTANT SERVICES \$X
COMMENT - MANY PROVINCIAL LEVEL FUNCTIONS ARE DONE IN NWT BY GSC. REGIONAL GEOLOGICAL MAPPING IS INCOMPLETE. REPLACING
THESE WOULD REQUIRE A STAFF OF + 50 AND \$5 MILLION.
- 0661 STAFF \$X CONSULTANT SERVICES \$X
COMMENT - IT'S DEBATABLE THAT WE WOULD GET THE QUALITY NO MATTER HOW WE TRIED TO GET AROUND REPLACING THIS DATA.

SECTION C

- 0654 NATIONAL SURVEY STANDARDS, INTERPROVINCIAL AND NATIONAL COMPILATIONS, SPECIAL SYMPOSIA, NATIONAL AND INTERNATIONAL PROJECTS, MONITORING RESEARCH AT THE NATIONAL LEVEL, REPORTING ON DEVELOPMENTS OUTSIDE CANADA, SPECIALIST EXPERTISE AND SUPPORT NOT READILY AVAILABLE TO ALL PROVINCES, NATIONAL INDEXES, EVALUATION OF SURVEY TECHNIQUES (REMOTE SENSING, E.G.), FUNDAMENTAL RESEARCH ON ECONOMIC GEOLOGY AT THE NATIONAL LEVEL.

SECTION D: COVERAGE, RELEVANCE, TIMELINESS, AND ACCURACY.

SECTION D1

0652 (G) THESE NUMBERS ARE AVERAGES FROM A RANGE OF 1-5. OUTPUT IS EXTREMELY VARIABLE.

SECTION D2

0650 RADIOMETRIC DATING IS SLOW. WITHDRAWAL FROM GEOCHEMICAL AND GEOPHYSICAL HAS BEEN DETRIMENTAL. MUCH OLD BUT VALID 1:250,000 MAPPING HAS NOT BEEN FOLLOWED BY MEMOIRS OR LITHOGRAPHED MAPS.

0652 (P) RATINGS CONDITIONED BY THE FACT THAT THE GSC HAVE VIRTUALLY OPTED OUT OF THESE ACTIVITIES IN SASK.

0653 RATINGS IN COLUMN (A) REFLECT PRIMARILY THE ABILITY OF THE GSC TO PICK UP THE SHORTFALL IN PROVINCIAL ACTIVITIES. THE MORE CAPABLE AND EFFICIENT THE PROVINCIAL ACTIVITY THE LESS SHORTFALL THERE IS FOR THE GSC TO SUPPLY AND CONSEQUENTLY A HIGHLY EFFICIENT PROVINCIAL PROGRAMME WOULD SEEMINGLY RATE THE GSC HIGHER THAN IF THERE WAS MORE WORK THAN BOTH ORGANIZATIONS COULD HANDLE.

0656A IN RECENT YEARS PUBLICATION OF MAPS HAVE BEEN INORDINATELY DELAYED.

0656B AM NOT AWARE OF SPECIFIC STUDY L,M,N,O.

0656D SOME 1:50,000 MAPS IN NEW BRUNSWICK HAVE BEEN MAPPED BUT NEVER PUBLISHED.

0657 SECTION (E) NOT ENOUGH CONTACT WITH EMR ON THESE SURVEYS SECTION (GIII) VERY POOR COMMUNICATION ON THIS SUBJECT IN GENERAL POOR MARGINAL AND MISSING DISCIPLINES REPRESENT AREAS WHERE NO COMMUNICATION HAS BEEN ESTABLISHED WITH THIS DEPARTMENT.

0659 THE GSC HAVE VERY LITTLE FORMAL OUTPUT IN MOST OF THESE AREAS FOR NEWFOUNDLAND AND LABRADOR. IF IT WEREN'T FOR OUR OWN WORK OF THE PAST 5 YEARS OR SO (ADMITTEDLY WITH MAJOR FINANCIAL ASSISTANCE FROM EMR AND DREE), WE'D BE IN DESPERATE STRAITS RIGHT NOW RELATIVE TO MOST OF THE DISCIPLINES LISTED IN D-2.

0660 GSC GEOCHRONOLOGY IS WOEFULLY INADEQUATE IF DONE 'IN HOUSE'. K-AR IS NOT SUFFICIENT| 1:50,000 MAPPING IS NOT

BEING DONE AS IT IS ESCHEWED BY GSC. (DIAND 1 50,000 MAPPING IS WOEFULLY INADEQUATE AT 2/3 SHEETS PER YEAR). GSC PRODUCTION OF 'FINAL' MAPS AND REPORTS IS ABYSMALLY SLOW

0661 WE FEEL THAT THE GSC MAPPING PROGRAM, PARTICULARLY AS 1:250,000 WORK IS UNDER EMPHASIZED BY THIS SURVEY AND WOULD LIKE TO SEE MORE OF THIS IN FUTURE. THE QUALITY OF THE WORK THAT DOES GET DONE IS FINE.

SECTION D

0654B CONTACTS AND INFORMATION EXCHANGE TEND TO BE BY DIRECT CONTACT RATHER THAN BY THE FINAL PUBLICATION.

0654C TIME TAKEN TO PUBLICATION IS FAR TOO LONG. SOME PROJECTS HAVE NEVER BEEN PUBLISHED ALTHOUGH WORK IS LONG FINISHED. IS THIS BECAUSE INTERNAL REVIEWERS ARE FAR TOO "PICKY"?

SECTION E: FORMAT OF PUBLICATIONS.

SECTION E1

- 0654 (A) THE PAPERS APPEAR TO BE OF GENERALLY LOWER QUALITY THAN OTHER PUBLICATIONS AND GIVE THE IMPRESSION OF PRELIMINARY OR INTERIM RATHER THAN FINAL REPORTS. THE PAPER SERIES MIGHT BE COMPARTMENTALIZED BY DISCIPLINE OR FUNCTION THROUGH THE USE OF DIFFERENT COLOURED COVER STOCK, E.G. GREEN FOR GEOCHEMISTRY, BROWN FOR ENGINEERING AND TERRAIN SCIENCE, ETC
- 0656B PERHAPS EXOTIC OR CLOURED MAPS HAVE OUTLIVED THEIR USEFULNESS - EFFECTIVENESS.
- 0657 COMMENT - QUALITY OF FED-PROVINCIAL GEOCHEM SURVEYS IS SUBJECT OF INVESTIGATION AT PRESENT.
- 0659 IT TAKES TOO LONG FOR THE GSC TO GET A GEOLOGY MAP PUBLISHED AFTER THE WORK HAS BEEN COMPLETED.
- 0661 PHOTOGRAPHS ARE OFTEN POORLY REPRODUCED.

SECTION E4

- 0650 ORDERING OF STANDARD HARD COPY SHOULD BE POSSIBLE AT USERS EXPENSE.
- 0652 COMMENT RE MICROFICHE: SLIGHTLY MORE THAN 50% OF THE SCIENTISTS CONTRIBUTING TO THIS QUESTIONNAIRE SAID NO.
- 0654A *AT THIS TIME - PUBLICATION COSTS ARE, BECOMING PROHIBITIVE - BUT FICHE SHOULD BE PHASED OUT IN FAVOUR OF COMPUTER ACCESS TO DATA BANKS.
- 0654C RELUCTANTLY "YES" BUT I GUESS ONE MUST BE PRAGMATIC - BETTER "SOME" THAN "NEVER".
- 0654 INDUSTRY USERS, PARTICULARLY SMALL COMPANIES AND INDIVIDUALS, MAY PREFER HARD COPY. IN THIS SENSE WE ARE AN INTERMEDIARY
- 0659 WE'RE IN THE PROCESS OF PUTTING ALL OUR ASSESSMENT REPORTS ON MICROFICHE AND HAVE PUT THE MICROFICHES OPTION IN OUR MINERAL REGULATIONS.
- 0660 A PAIN IN THE ASS FOR THOSE WHO RARELY USE IT.

SECTION E6

- 0654C UGAIS
WE PLAN TO INTEGRATE OUR DATA WITH THAT OF UGAIS
WHATEVER STAFF AND FUNDING BECOMES AVAILABLE.
- 0654 SATISFACTORY FOR OUR PURPOSES. HOWEVER, END USERS MAY
PREFER TAPES. MICROFICHE SHOULD NOT BE USED AT THE
EXCLUSION OF TAPES.
- 0657 NO GEOPHYSICIST, THEREFORE NO TAPE USE AT PRESENT.
- 0659 WE ACCESS GEOSCAN ON-LINE AND EXPECT TO USE IT MORE
AFTER IT BECOMES MORE ACCESSIBLE AND GETS UPDATED IN A
MORE TIMELY MANNER.
- 0660 WE HAVE NOT USED THESE PROBABLY COULD HANDLE THEM AS WE
HAVE A COMPUTER TERMINAL IN OUR ADMIN. SECTION (BUT NOT
IN GEOLOGY).

SECTION F: ACCESS.
-----**SECTION F1**

- 0660 WE MAINTAIN AN ALMOST COMPLETE LIBRARY OF GSC BULLS, MEMS. PAPERS (AND OTHER MATERIALS ON NWT).
- 0661 WE MAINTAIN A COMPLETE LIBRARY OF GSC MATERIAL FOR PUBLIC USE AND FIND IT GETS HEAVY USE YEAR ROUND.

SECTION F2

- 0660 UNAVAILABILITY OF GSC PUBLICATIONS BECAUSE THEY ARE OUT OF PRINT IS BECOMING A PROBLEM. WE GET QUITE A FEW REQUESTS FOR PUBLICATIONS THAT ARE NO LONGER AVAILABLE.

SECTION F3

- 0650 GEOREF COULD BE IMPROVED BASICALLY BECAUSE SUBMITTAL IS PASSIVE.
- 0654C INFORMATION SERVICES - FROM INDIVIDUAL GEOLOGISTS.
- 0659 YES FOR WHAT WE HAVE INDEXED OURSELVES. GEOSCAN COULD BE BETTER.

SECTION F

- 0654C IN OUR CASE THE COMPANY LIBRARY IS THE GOVT. LIBRARY. UNIVERSITY LIBRARIES USED IF OGS LIBRARY DOES NOT HOLD ITEM.

SECTION G: INFORMAL OUTPUT.

SECTION G3

- 0654A IN THE ABSENCE OF A PRECISE KNOWLEDGE OF WHICH WORKSHOPS ETC. ARE PARTICIPATED IN, AND STAFF LEVELS, I WOULD NOT LIKE TO COMMENT.
- 0659 THEY SHOULD PARTICIPATE MORE IN THE "LOCAL" MEETINGS, INCLUDING, E.G., HAVING THEIR OWN DISPLAYS AT PROVINCIAL OPEN HOUSES.
- 0660 WE ORGANIZE A YEARLY WORKSHOP ON NWT MINERAL EXPLORATION AND GEOLOGY GSC IS CONSIDERED A CO-SPONSOR BUT THEY ARE RELATIVELY UNINTERESTED. MANY OFFICERS DO NOT CONSIDER IT IMPORTANT TO DISCUSS THEIR WORK IN THE COLONY|

SECTION G4

- 0654A EXT. PUBLICATIONS ARE EFFECTIVE MEANS OF COMMUNICATION BUT:
- 1) SPACE IS LIMITED - OTHER SCIENTISTS NEED COMMUNICATION SPACE AND EXTERNAL MAY BE THEIR ONLY MEDIUM,
 - 2) PUBLICATION IS PRIORITIZED BY EXTERNAL NON-INTEGRATED GROUPS - SOME SUBJECTS MAY HAVE DIFFICULTY FINDING AN EXTERNAL MEDIUM - THE RESPONSIVENESS AND PRIORITIES OF THE EXTERNAL MEDIA WILL OFTEN NOT MATCH THE ORGANIZATIONS OBJECTIVES AND PRIORITIES.
 - 3) A BALANCE OF INTERNAL AND EXTERNAL IS NEEDED. GENERALLY, LIMITATIONS OF SPACE, FORMAT ETC. RENDER EXTERNALS BETTER TRANSMITTERS OF IDEAS THAN OF DATA. MUCH DATA MAY ULTIMATELY BE COMPUTERIZED BEST. THERE IS, AND WILL CONTINUE TO BE A NEED FOR PUBLICATION WHICH PROVIDE A MORE EXTENSIVE BRIDGE BETWEEN DATA AND IDEAS THAN IS FEASIBLE IN JOURNALS.
 - 4) I WOULD SUGGEST THAT ORGANIZATION EFFECTIVENESS VISIBILITY COULD ACTUALLY DECREASE WITH TOO GREAT A RELIANCE ON EXTERNAL PUBLICATIONS. INFORMATION USERS WILL NOT CORRELATE SCIENTISTS, ORGANIZATIONS, AND VOLUME EFFECTIVELY.
- 0654 WITH QUALIFICATION.
- 0659 OK BUT THE DIRECT, FORMAL GSC OUTPUT IS MORE EFFECTIVE.

SECTIONS G1 TO G4

- 0650 G4 PUBLISHING EXTENSIVELY IN EXTERNAL JOURNALS MAY REFLECT PROBLEMS IN THE INTERNAL PUBLICATION SYSTEMS. ATTENDANCE BY GSC PERSONNEL AT MEETINGS IS IMPORTANT FOR THE USERS OF THEIR DATA AS WELL AS THEMSELVES. IT SHOULD BE ENCOURAGED.
- 0654 OUTSIDE PUBLICATION OFTEN IS SLOW, MAY NOT BE GIVEN MUCH PRIORITY, AND MAY APPEAR IN JOURNALS OF LIMITED DISTRIBUTION IN RELATION TO INDUSTRY CLIENTS. THERE IS A REAL QUESTION IN OUR MINDS THAT ALL COMPANY PERSONNEL RECEIVE AND READ ALL JOURNALS IN WHICH RELEVANT GSC MATERIAL IS PUBLISHED. WE WOULD FAVOUR PUBLICATION IN GSC SERIES RATHER THAN A MULTITUDE OF JOURNALS, WHILE RECOGNIZING THE LATTER ALSO IS NECESSARY FOR WIDE RECOGNITION OF NEW SCIENTIFIC ACHIEVEMENTS BY THE COMMUNITY AT LARGE, BOTH NATIONALLY AND INTERNATIONALLY.
- 0656E OUTSIDE PUBLICATION IS A GOOD IDEA, BECAUSE IT IMPROVES QUALITY AND RELEVANCE OF THE WORK. HOWEVER, REPRINTS SHOULD BE AVAILABLE THROUGH GSC AND AVAILABILITY OF THESE REPRINTS SHOULD BE MADE KNOWN.
- 0659 GSC WORK IS BEING DONE FOR A PURPOSE, MOSTLY A PURPOSE RELATED TO RESOURCE MANAGEMENT, NOT JUST FOR ACADEMIC SATISFACTION. THEREFORE, THE GSC SHOULD PUT MORE EMPHASIS ON GETTING ITS RESULTS OUT AND AVAILABLE FOR INDUSTRY AND OTHERS INVOLVED IN RESOURCE ASSESSMENT AND EXPLORATION.

SECTION G

- 0654C MORE GSC STAFF AT CONFERENCES SHOULD BE ENCOURAGED - IN CANADA AS WELL AS THE U.S.

SECTION H: CURRENT RESEARCH AND NEW DIRECTIONS.

SECTION H1

0654A IT IS NOT OBVIOUS THAT COMMENT IS SOUGHT AND I WOULD SUGGEST THIS IS A FACTOR IN THE RESPONSE LEVEL, BUT

SECTION H2

0654A I WOULD SUSPECT (B), (C) AND (D) WILL ALSO BE AN INFLUENCE
 (E) SOME OF THE MATERIAL IS USEFUL PRELIMINARY REPORTING BUT NOT CONTROVERSIAL,
 (D) MANY RESPONSES WOULD NOT WARRANT GOING THROUGH CHANNELS OR NEED 'SUPERVISOR' INVOLVEMENT, SO DIRECT CONTACT IS MORE LIKELY, AND
 (E) SOME KNOWLEDGEABLE SCIENTISTS MAY PERCEIVE THEY OWN POTENTIAL PUBLICATIONS - RESPONSE.

SECTION H3

0650 NOT EVERYBODY IN OUR ORGANIZATION IS AWARE COMMENT IS WELCOMED IN CURRENT RESEARCH - AS IT BECOMES BETTER KNOWN MORE RESPONSE WILL ARISE. IT SEEMS A USEFUL DEVICE. FOR MANY, HOWEVER, DIRECT APPROACH TO AUTHORS WILL BE FAVOURED.

0654C 1) WOULD LIKE MORE ATTENTION GIVEN TO URBAN GEOLOGY, ENGINEERING GEOLOGY,
 2) WOULD LIKE TO SEE PUBLICATION OF FINAL REPORTS SPEEDED UP. AUTHORS ARE FREQUENTLY TO BLAME BUT NOT ALWAYS||

0654 SEE INDIVIDUAL RESPONSES ATTACHED. THE COVER STOCK OF THE PAPER SERIES MIGHT BE COLOURED SO THAT AN INDIVIDUAL COLOUR REFERS TO A SPECIFIC CATEGORY OF RESEARCH, E.G. GREEN FOR PRECAMBRIAN SURVEYS, BLUE FOR PHANEROZOIC SURVEYS, YELLOW FOR GEOCHEMISTRY, BROWN FOR URBAN AND ENGINEERING GEOLOGY, ETC. INDEXES SIMILARLY MIGHT REFLECT SUCH A SUBDIVISION. THERE IS A GENERAL CONSENSUS HERE THAT THE PUBLICATION PROCESS IN GENERAL COULD BE SPEEDED UP.

0656A MORE REGIONAL GEOLOGICAL STUDIES

0656B (1) MORE REGIONAL STRATIGRAPHIC SYNTHESSES

- (2) MORE PRACTICAL RESEARCH (ORE DEPOSITS)
- (3) MORE CASE HISTORY, INDIVIDUAL MINERALS DEPOSITS
- (4) CASE HISTORY - GEOPHYSICS AND GEOCHEMISTRY

- 0656E SOME OF THE MOST USEFUL TYPE OF OUTPUT FOR US IS THAT ON PETROLOGY. ALSO TRACE ELEMENT GEOCHEMISTRY OF PLUTONIC AND VOLCANIC ROCKS IS VERY HELPFUL TO US, WE PARTICULARLY NEED GOOD STANDARDS.
- 0657 LARGER PRINTINGS OF INFORMATION ON APPALACHIAN GEOLOGY (TOO MANY ARE OUT OF PRINT). REGIONAL LAND-BASED GEOLOGICAL RESEARCH EXPANSION (APPALACHIAN OFFICE EXPANSION AT BIO).
- 0659 MORE RAPID OUTPUT OF FULL SCALE MAPS, ESPECIALLY IN CONSULTATION WITH THE PROVINCES RELATIVE TO ANYTHING FOR A PROVINCE, THE GSC SHOULD TRY NOT TO OPERATE IN A VACUUM. MORE CONSULTATION WITH THE RESPECTIVE PROVINCES RELATIVE TO "ANY" GSC WORK PLANNED OR BEING DONE IN A PROVINCE. THIS SHOULD INCLUDE WORK BEING FUNDED THROUGH UNIVERSITY RESEARCH GRANTS.
- 0660 MOST NON PHD GEOLOGISTS ARE HESITANT TO PUT THEMSELVES INTO A CONFLICT WITH 'RESEARCHERS' WHO ARE FAR BETTER EQUIPPED TO REPEL BOARDERS THAN THEY ARE. MOST COMPANY AND MANY OTHER GOVERNMENT GEOLOGISTS DO NOT HAVE TIME NOR INCENTIVES TO RESPOND ON POINTS THEY FEEL ARE INCORRECT OR MOOT. THERE SEEMS LITTLE POINT IN WRITING RESPONSES TO WORK YOU AGREE WITH - THOUGH SOME ACADEMICS MAKE A CAREER OF THIS|
- 0661 I RE-EMPHASIZE THE NEED FOR REGIONAL BEDROCK MAPPING TO BECOME MORE IMPORTANT - THIS IS THE MOST VALUABLE AND IRREPLACABLE PART OF GSC OUTPUT.

SECTION H

- 0654B GREATER EMPHASIS ON PROMPT PUBLICATION EITHER DURING OR AFTER COMPLETION OF FIELD WORK.

THE FOLLOWING CRITERIA WERE USED FOR SELECTING QUESTIONNAIRES
TO BE INCLUDED IN THIS REPORT:

PROVINCIAL AGENCIES B (OTHER GEOSCIENCE AGENCIES)

FORM NUMBERS: "0662 " THRU "0672 "

THIS REPORT PRODUCED -

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SECTION B: INTERESTS.
-----**SECTION B3**

- 0663 ALSO SOILS, AND APPLICATION OF TERRAIN SOIL DATA TO
 LANDUSE PLANNING AND RESOURCE MANAGEMENT; SHORELINE
 STUDIES.
- 0664 GROUNDWATER INVENTORY, DEVELOPMENT, MONITORING AND
 PROTECTION
- 0666 MUSEUM

SECTION B4

- 0666 COMMENTS - EMPHASIS ON NOVA SCOTIA AND ATLANTIC CANADA
 BUT CONCERNED WITH ALL GLOBAL EVENTS AND INTERESTS AS
 WELL.

SECTION B

- 0662 AGENCY IS ACCOUNTABLE FOR THE COLLECTION, COMPILATION
 AND ASSESSMENT OF GEOLOGICAL AND RELATED INFORMATION
 CONCERNED WITH THE EXPLORATION FOR AND DEVELOPMENT OF
 OIL AND NATURAL GAS RESOURCES WITHIN PRODUCING AND
 NON-PRODUCING AREAS OF THE PROVINCE.
- 0665 INTEREST CONFINED TO PROVINCE OF B.C.
- 0667 PROVINCE OF NOVA SCOTIA - LAND BASED, NO OFFSHORE.
- 0669 (SOIL AND GRAVEL EXPLORATION) PROVINCE OF MANITOBA

SECTION C: NATURE OF USE OF GSC OUTPUT.
-----**SECTIONS C1 TO C5**

- 0662 COMPUTER PRINT OUT OF SELECTED INFORMATION FROM B.C. OIL AND GAS RESERVE DATABASE FILE ON A YEARLY BASIS. (COPY OF FILE IS TRANSMITTED TO GSC ON YEARLY BASIS).
- 0665 REPORTS AND MAPS ARE USED TO PROVIDE BACKGROUND INFORMATION TO GEOTECHNICAL INVESTIGATIONS, GEOLOGICAL HAZARDS AND CONSTRUCTION MATERIALS INVESTIGATIONS.
- 0666 NOT CERTAIN AS TO MEANING OF "EXTERNAL PUBLICATIONS", IF THE MEANING IS MATERIAL PUBLISHED IN SCIENTIFIC JOURNALS THEN MONTHLY IS MY REPLY.

SECTION C8

- 0664 RELY UPON SURFICIAL GEOLOGICAL MAPPING FOR GROUNDWATER WORK.
- 0665 IN MANY AREAS GSC INFORMATION IS THE ONLY SOURCE OF GEOLOGICAL INFORMATION.
- 0666 WE COULD NOT REPLACE THE IDENTIFICATION SERVICES PROVIDED FOR METEORITES, THE SERVICE ON DATING BY C-14 OR THE PALYNOLOGY SERVICES PROVIDED.

SECTION C9

- 0662 STAFF \$X CONSULTANT SERVICES \$
COMMENTS: APPROPRIATE PROGRAM COULD BE DEVELOPED FOR B.C. OIL AND GAS RESERVE IN-HOUSE DATABASE FILE.
- 0665 DIFFICULT TO ASSESS. EFFECT WOULD PROBABLY BE TO DELAY CONCLUSION OF INVESTIGATION SLIGHTLY OR INFORMATION WOULD SIMPLY NOT BE UTILIZED LEADING TO A LOWER STANDARD OF REPORT.

SECTION D: COVERAGE, RELEVANCE, TIMELINESS, AND ACCURACY.
-----**SECTION D2**

- 0663 MORE TERRAIN/SURFICIAL GEOLOGY MAPPING IS NEEDED IN BC AND ASSOCIATED SYSTEMATIC STUDIES OF QUARTERNARY GEOLOGY/ GEOMORPHOLOGY.
- 0664 MORE DETAILED STRUCTURAL GEOLOGY STUDIES WOULD BE DESIRABLE TO ASSIST IN ANALYSIS OF GROUNDWATER FLOW IN FRACTURED BEDROCK TERRAIN, ALSO GEOPHYSICAL SURVEYS ACROSS MAJOR VALLEYS THROUGHOUT SETTLED AREAS TO DELINEATE NATURE AND THICKNESS OF UNCONSOLIDATED DEPOSITS.
- 0666 QUARTERNARY GEOLOGY POOR SCORES AND RADIOMETRIC DATING POOR SCORES ARE RELATED TO EXTREME LAB OVERLOAD. TOO MUCH WORK FOR TOO FEW PEOPLE|

SECTION D

- 0662 THE DURATION OF USEFULNESS OF GSC FORMAL OUTPUT NOTED UNDER SECTION D IS NOT NECESSARILY A MARGINAL OR POOR SCORE. IT IS THE NATURE OF THE BUSINESS AND THE AMOUNT OF NEW INFORMATION MADE AVAILABLE IN ANY ONE YEAR THAT OUT-DATE A RELATIVELY RECENT PUBLICATION. FOR EXAMPLE, REPORT EP 77-1 ON OIL AND NATURAL GAS RESOURCES OF CANADA 1976 WAS OUT OF DATE BY 1979.
- 0665 COVERAGE OF SURFICIAL GEOLOGY MAPPING IN B.C. IS VERY POOR. BEDROCK MAPPING IS ADEQUATE BUT CONCENTRATED IN AREAS OF MINING ACTIVITY. URBAN GEOLOGY AND ENGINEERING COVERAGE IS VIRTUALLY ZERO. QUALITY OF INFORMATION AVAILABLE IS GOOD AND THE DURATION OF USEFULNESS IS MORE THAN ADEQUATE.

SECTION E: FORMAT OF PUBLICATIONS.
-----**SECTION E1**

- 0663 (A) GSC PUBLICATION PROCESS IF FAR TO SLOW|
(B) DITTO
- 0665 (B) USE OF COLOUR PREFERRED FOR MAPS.
- 0666 I LOOK FOR THINGS HAPPENING IN NS SOMETIMES NOT ALWAYS
EASY TO LOCATE WHO AND WHERE THE WORK IS BEING DONE.

SECTION E4

- 0665 PROVIDING BASIC INFORMATION IS PRESENTED IN BOOK OR MAP
FORMAT.
- 0666 BASIC INFO SHOULD REMAIN IN THE USUAL FORMATS BUT
SUPPORTING DATA WOULD BE ACCEPTABLE ON MICROFICHE.

SECTION E6

- 0663 NO APPLICABLE
- 0666 WOULD LOVE TO HAVE ACCESS TO COMPUTERIZED INFO BUT NO
\$'S FOR TERMINAL.

SECTION E

- 0662 B.C. OIL AND GAS RESERVE DATABASE FILE SUPPLIED TO THE
GSC ON ANNUAL UP-DATE BASIS. COMMENT RE COMPUTER TAPES:
ESSENTIAL IN DETERMINING CUMULATIVE PER CENT PROBABILITY
DISTRIBUTION OF A GEOLOGIC PLAY WITHIN PRODUCING AND
NON-PRODUCING AREAS.

SECTION F: ACCESS.
-----**SECTION F1**

- 0663 ALSO UBC LIBRARY; ALSO GSC LIBRARY (VANC) IS VERY
 HELPFUL.
- 0665 BRANCH HAS ITS OWN LIMITED LIBRARY OF GSC PUBLICATIONS.
 INFORMATION NOT AVAILABLE IS OBTAINED FROM MINISTRY OF
 ENERGY, MINES AND PETROLEUM RESOURCES LIBRARY.
- 0666 WOULD LIKE TO RECEIVE ALL GSC PUBLICATIONS FOR OUR
 LIBRARY BUT CANNOT AFFORD.

SECTION F3

- 0666 I AM UNDER THE IMPRESSION THAT GEOREF HAS A CHARGE FOR
 ITS SERVICE.

SECTION H: CURRENT RESEARCH AND NEW DIRECTIONS.
-----**SECTION H3**

- 0663 MICROFILM/FICHE OUT-OF-PRINT GSC PAPERS, BULLETIN;
 MEMOIRS.
- 0666 I WOULD OCCASIONALLY LIKE TO SEE AN ORGANIZATIONAL CHART
 OR SOME SUCH LISTING OF PEOPLE AND SERVICES, SO THAT I
 WOULD KNOW WHO TO CONTACT ABOUT WHAT, WHEN THE NEED
 ARISES. ALL IN ALL, I AM VERY SATISFIED WITH GSC OUTPUT.
 IT IS A BASIC SERVICE WHICH FOR A PERSON IN MY FIELD IS
 AN ABSOLUTE ESSENTIAL. PERHAPS MORE CLARIFICATION CAN BE
 MADE AS TO WHERE THE NATIONAL MUSEUM AND THE GEOLOGICAL
 SURVEY ARE DIVIDED.

SECTION H

- 0665 RATHER DEVELOP IN OTHER SPHERES AND DIRECTIONS, IT WOULD
 BE PREFERABLE TO SEE THE GSC CONTINUE TO CARRY OUT
 REGIONAL GEOLOGICAL MAPPING OF BEDROCK AND SURFICIAL
 COVER AT THE 1:50,000 AND 1:250,000 SCALE. BECAUSE OF
 THE SITE SPECIFIC NATURE OF OUR WORK WE WOULD PREFER TO
 SEE MORE MAPPING AT LARGE SCALES, E.G. 1:50,000 OR
 BETTER.

THE FOLLOWING CRITERIA WERE USED FOR SELECTING QUESTIONNAIRES
TO BE INCLUDED IN THIS REPORT:

PETROLEUM COMPANIES

FORM NUMBERS: "0700 " THRU "0750 "
 "0752 " THRU "0757 "

THIS REPORT PRODUCED -

APR 7, 1981

SECTION B: INTERESTS.

SECTION B4

- 0712 COMPANY SPECIFICALLY ACTIVE IN THE INTERMONTANE BASINS OF THE WESTERN CORDILLERA (I.E. THE NETCHAKO BASIN) AND IN THE ALBERTA AND N.E. BRITISH COLUMBIA PORTION OF THE WESTERN SEDIMENTARY BASIN.
- 0716 ONLY IF WESTERN CORDILLERA INCLUDES FRONT RANGES.

SECTION B

- 0703 THE LARGE NUMBER OF AREAS REPRESENT THE SUM TOTAL OF HYDROCARBON AND MINING EXPLORATION EFFORTS.
- 0717 CO. OWNS SUBSTANTIAL INTERESTS IN GOLD PROPERTIES.
- 0721 THESE AREAS OF INTEREST COULD QUICKLY EXPAND OR CONTRACT.
- 0725 ALTHOUGH THE COMPANY IS INVOLVED IN THE SEGMENTS OF THE NATURAL RESOURCES INDUSTRY LISTED ABOVE, THE ANSWERS TO THIS SURVEY REFLECT THE OPINIONS OF ONLY THE PETROLEUM EXPLORATION DEPT.
- 0742 WE HAVE COAL AND URANIUM EXPLORATION OPERATIONS OUTSIDE OF OUR OIL AND GAS EXPLORATION GROUP - THIS RESPONSE DOES NOT COMBINE THEIR ACTIVITIES. PRIMARY INTEREST AREAS: 1) WESTERN SEDIMENTARY BASIN, 2) ARCTIC ISLANDS, 3) WESTERN ARCTIC OFFSHORE AND ATLANTIC AND EASTERN OFFSHORE.
- 0757 FROM 1968 TO 1974 MY ORGANIZATION WAS A CONSULTING FIRM TO THE OIL AND GAS INDUSTRY - FROM 1974 TO 1978 MY FIRM WAS ESSENTIALLY AN OIL AND GAS COMPANY WITH NO SERVICES TO THE GENERAL INDUSTRY. COMMENTS: AS A CONSULTING FIRM I SPECIALIZED IN THE ARCTIC ISLANDS WHERE I DID FIELD WORK (GEOLOGIC MAPPING) FOR VARIOUS CLIENTS. I ALSO WORKED ON THE ATLANTIC OFFSHORE AND THE WESTERN CANADA BASIN. AFTER 1974 I CONFINED MY EXPLORATION ACTIVITIES TO THE WESTERN CANADA BASIN PLUS THE CENTRAL PLAINS, GULF COAST, ROCKY MOUNTAINS BASINS AND THE PACIFIC COAST REGION OF THE U.S.A. UNTIL RECENTLY MY ORGANIZATION MANAGED SEVERAL OIL AND GAS COMPANIES WITH OFFICES IN CALGARY, DENVER AND HOUSTON. I RESIGNED RECENTLY FROM THESE COMPANIES AND AM ESSENTIALLY RETIRED EXCEPT FOR DRILLING AND PARTICIPATING IN 5 OR 6 WELLS PER YEAR. BEFORE RETIREMENT I HAD ABOUT 70 EMPLOYEES, OF THESE

ABOUT 12 WERE GEOSCIENTISTS.

SECTION C: NATURE OF USE OF GSC OUTPUT.
-----**SECTION C2**

0757 (3) FOR ARCTIC AREAS (5) FOR OTHER AREAS.

SECTION C3

0716 (B) GEOCHEMICAL AND OFFSHORE MULTI-PARAMETER - HAVE NOT SEEN.

0721 (B) OFFSHORE MULTI PARAMETER AND REGIONAL COMPILATION - DON'T KNOW.

SECTION C5

0716 USE IS PRINCIPALLY WITH GSC PERSONNEL INFORMAL CONTACT WORKSHOPS, MEETINGS, ETC. INCLUDE THOSE OF SOCIETIES WITH SIGNIFICANT GSC INPUT.

SECTIONS C1 TO C5

0706 OUR ACTIVITIES ARE CONFINED (ABOUT 90%) TO THE WESTERN CDN. SED. BASIN IN WHICH GSC STUDIES AND OUTPUT ARE OF MINIMAL VALUE, IN OUR OPINION.

0712 FREQUENCY OF USE OF GSC OUTPUT VARIES FROM OCCASIONAL TO PERIODS OF CONTINUOUS USAGE.

0715 IN 19 YEARS I HAVE REQUESTED VERBAL ADVICE TWO TIMES. THIS WAS ON A STRATIGRAPHIC PROBLEM IN THE NWT.

0717 MOST OF THE INFORMATION IS USED IN FRONTIER AREAS, WHERE WELL CONTROL IS SPARSE. EG. FOOTHILLS, NWT, ARCTIC AND EASTCOAST OFFSHORE. IN OUR DAILY SEARCH FOR OIL AND GAS PROSPECTS, INFORMATION IS SUPPLIED BY LOCAL PROVINCIAL AGENCIES OR COMMERCIAL BUSINESS FIRMS.

0719 OCCASIONAL USE WOULD BE A MORE PROPER RESPONSE THAN YEARLY.

- 0724 BASED ON CUMULATIVE USAGE OF 35 GEOLOGISTS.
- 0725 THE PUBLICATIONS AND WORK ARE USUALLY OF VERY GOOD QUALITY. G.S.C. STAFF MEMBERS ARE OPEN TO QUESTIONS AND DISCUSSIONS REGARDING THEIR WORK. HOWEVER THERE OFTEN SEEMS TO BE A LONG DELAY BETWEEN PROJECT COMPLETION AND FORMAL PUBLICATION.
- 0733 THE MOST VALUABLE DATA AND IDEAS ARE COMMUNICATED VERBALLY (FROM INFORMAL DISCUSSION), NOT FROM PUBLICATIONS.
- 0737 IN THE PAST WE HAVE CONTACTED REPORT AUTHORS IN PERSON FOR ADDITIONAL DISCUSSIONS. (MOSTLY FOR THE ARCTIC ISLANDS).
- 0740 C-4(B) GEOPHYSICAL MAPS - NUMBERS NOT DENSE ENOUGH FOR NUMERICAL INTERPRETATION.
- 0742 GSC DATA IS PREDOMINANTLY USED AS A REFERENCE BASE - THE DATA IS WELL RESEARCHED AND DOCUMENTED AND PROVIDES A SOLID BASE FOR ADDITIONAL STUDIES.

SECTION C6

- 0717 POSSIBLY INDIRECTLY.
- 0721 PROBABLY SOME VALUE BUT NOT "DIRECT"

SECTION C8

- 0703 USE OF BASIC DATA, THEREFORE INDIRECT ECONOMIC BENEFIT ONLY.
- 0704 THE STAFF.
- 0706 SEE COMMENTS ON C-1 TO C-5.
- 0712 REGIONAL GEOLOGIC MAPS.
- 0715 I BELIEVE THAT THE GSC DOES BASIC WORK THAT I COULD NOT AFFORD TO DO AND I WOULD ATTEMPT TO GET ALONG WITHOUT IT.
- 0716 DIRECT ECONOMIC BENEFIT DIFFICULT TO QUANTIFY - FOR AS WITH MOST GEOLOGICAL WORK, WHAT PORTION OF THE WHOLE IS

OF GREATEST ECONOMIC SIGNIFICANCE.

- 0717 MEMOIRS AND GEOL. PAPERS ARE INVALUABLE, PARTICULARLY IN FOOTHILLS AND REMOTE AREAS. INDUSTRY INFO. IS SPARSE AND EXPENSIVE.
- 0719 THE ABOVE RESPONSES ARE YES, BUT QUALIFIED. FOR INVESTIGATIONS OF NEW AREAS OR FIELDS OF GEOLOGY WE REFER TO GSC FIRST.
- 0720 GSC DOCUMENTS, REPORTS, PAPERS, ETC. PROVIDE INVALUABLE INFORMATION IN GEOGRAPHICAL AREAS AND EARTH SCIENCE DISCIPLINES WHICH NO ONE COMPANY COULD COVER ON ITS OWN.
- 0723 SURFACE MAPPING (GEOLOGICAL).
- 0724 PALEONTOLOGICAL; STRATIGRAPHIC; BASIN ANALYSES IN FRONTIER REGIONS; GEOCHEMICAL; AEROMAG AND GRAVITY SURVEYS.
- 0725 ECONOMIC BENEFITS ARE INDIRECT RATHER THAN DIRECT.
- 0728 THE DIRECT ECONOMIC BENEFIT IS HARD TO COMPUTE AS GSC DOCUMENTATION MAY BE ONLY ONE OF MANY SOURCES USED TO MAKE A PLAY THAT LEADS TO A DISCOVERY OF A COMMERCIALY VIABLE PROSPECT.
- 0729 WOULD DO WITHOUT PROBABLY.
- 0730 GEOLOGICAL, GEOPHYSICAL GEOCHEMICAL MAPS.
- 0733 DATA FROM FIELD STUDIES.
- 0736 REGIONAL SURFACE MAPS AND DETAILED STRATIGRAPHIC STUDIES, MICROPALEO STUDIES.
- 0737 IN FRONTIER AREAS (ARCTIC ISLANDS, BEAUFORT SEA MARGIN) THEY HAVE PROVIDED NOMENCLATURE, ROCK DESCRIPTIONS, AND SOME BASIN ANALYSIS.
- 0738 INDIRECT BENEFITS, FOR SURE.
- 0740 SURFACE MAPS - ARCTIC STUDIES.
- 0742 THE DIRECT ECONOMIC BENEFIT IS TIME AND STAFF SAVED BY THE GSC'S GENERATION OF BASIC GEOLOGIC DATA. THIS DATA COULD BE GATHERED BY INDUSTRY, BUT NOT AS EFFECTIVELY OR AS EFFICIENTLY.
- 0743 EXCELLENT FIELD GEOLOGY REPORTS THAT WOULD BE VERY DIFFICULT TO REPLACE.
- 0757 COMMENT: PAPERS AND MEMOIRS THAT DEAL WITH BASIC GEOLOGY OF SPECIFIC AREAS, ALSO REGIONAL ANALYSES. GSC BEDROCK

MAPS ARE AVAILABLE FROM NO OTHER SOURCE EXCEPT PRIVATE.

SECTION C9

- 0700 STAFF \$60,000 CONSULTANT SERVICES \$100,000.
- 0703 IMPOSSIBLE QUESTION.
- 0704 STAFF \$X CONSULTANT SERVICES \$X.
- 0706 SEE COMMENTS ON C-1 TO C-5.
- 0712 STAFF \$ CONSULTANT SERVICES \$X.
NO ACCURATE MEANS OF ESTIMATING COSTS.
- 0715 STAFF \$40,000 CONSULTANT SERVICES \$20,000.
- 0716 STAFF \$ CONSULTANT SERVICES \$X.
FOR C-9 AS C-8 ABOVE. MUCH GSC WORK HAS PROVIDED A
FRAMEWORK OF GEOLOGICAL INFORMATION DIFFICULT TO ASSESS
IN DOLLARS AND CENTS.
- 0717 STAFF \$X CONSULTANT SERVICES \$
THE COST OF SENDING A FIELD PARTY OUT WOULD BE
SIGNIFICANT, BUT ONLY A FEW COMPANIES ARE INVOLVED IN
THIS TYPE OF WORK. THE INVALUABLE SCIENTIFIC AND
MAPPINGS RESEARCH DONE BY THE GSC WOULD BE VERY COSTLY.
THIS INFO. USUALLY FILTERS DOWN TO SMALL COMPANIES LIKE
OURSELVES, VIA PUBLICATIONS AND TALKS PUT ON BY OUR
LOCAL C.S.P.G. SOCIETY.
- 0719 THERE IS NO REAL ANSWER IN DOLLARS TO C-9 BECAUSE WE USE
GSC FOR READY REFERENCE; THE STARTING POINT IN NEW AREAS
AND FIELDS OF ENDEAVORS. IF WE ALWAYS HAD TO SEND OUT
FIELD PARTIES OR EMPLOY CONSULTANTS MY "GUESSTIMATE"
WOULD BE A VALUE OF \$1,000,000.
- 0721 STAFF \$ CONSULTANT SERVICES \$50,000.
THIS ESTIMATE IS VERY NEBULOUS.
- 0723 STAFF \$30,000 CONSULTANT SERVICES \$20,000.
WOULD PROBABLY DO WITHOUT IN MOST CASES.
- 0724 STAFF \$ CONSULTANT SERVICES \$200,000.
CERTAIN TYPES OF GSC ACTIVITY AND PUBLICATIONS ARE
IRREPLACABLE - I.E. LARGE FIELD PROJECTS AND REGIONAL
MAPPING CAMPAIGNS, LARGE-SCALE STRUCTURAL-TECTONIC
STUDIES, FRONTIERS BASIN STUDIES INCLUDING
BIOSTRATIGRAPHY. WE WOULD SIMPLY BE UNABLE TO REPLACE
THESE EFFORTS.

- 0725 STAFF \$ CONSULTANT SERVICES \$X.
IT IS DIFFICULT TO PUT A DOLLAR VALUE AND REPLACEMENT OF SERVICES FOR EXAMPLE, IF THE GSC WAS NOT AVAILABLE, MORE CONSULTING FIRMS OFFERING GROUP SERVICES AND PARTICIPATION SURVEYS WOULD APPEAR ON THE SCENE. THIS WOULD INVOLVE A DIFFERENT COST STRUCTURE COMPARED TO A SITUATION IN WHICH A SPECIFIC SERVICE IS PROVIDED TO AN INDIVIDUAL COMPANY BY A CONSULTANT.
- 0728 STAFF \$2,500 CONSULTANT SERVICES \$10,000.
BASED ON ONE MAN MONTH OF JUNIOR GEOLOGISTS TIME PLUS SHARE OF GROUP PROJECT TO ACQUIRE BASIC DATA IN REMOTE AREAS.
- 0730 STAFF \$ CONSULTANT SERVICES \$X.
UNABLE TO ESTIMATE.
- 0733 STAFF \$ CONSULTANT SERVICES \$25,000.
- 0734 STAFF \$ CONSULTANT SERVICES \$70,000.
- 0736 STAFF \$ CONSULTANT SERVICES \$20,000.
- 0737 STAFF \$ CONSULTANT \$15,000.00.
COMMENT: GSC REPORTS ARE USED FOR REGIONAL STUDIES VS SPECIFIC (PROSPECT) STUDIES.
- 0738 STAFF \$ CONSULTANT SERVICES \$X.
GSC HAS NO OR A VERY LIMITED COMPETITION, AND, AS A RESULT, REPLACEMENT COSTS ARE DIFFICULT TO COMPARE, ESPECIALLY "PER YEAR".
- 0742 STAFF \$X CONSULTANT SERVICES \$X.
IT IS IMPOSSIBLE TO ASSIGN A COST FIGURE AS THE ONLY PRACTICAL MEANS TO REPLACING GSC OUTPUT WOULD BE THROUGH CO-OPERATIVE OR GROUP STUDY PROJECTS - A SINGLE COMPANY COULD NOT AFFORD TO DO EXCLUSIVE STUDIES.
- 0743 STAFF \$X CONSULTANT SERVICES \$
- 0745 STAFF \$ CONSULTANT SERVICES \$X.
- 0749 STAFF \$ CONSULTANT SERVICES \$X.
- 0750 STAFF \$ CONSULTANT SERVICES \$50,000.
- 0755 STAFF \$ CONSULTANTS SERVICES \$LOTS OF MONEY.
- 0757 COMMENT: CANNOT ANSWER WITH ANY ACCURACY. WOULD PROBABLY DO WITHOUT IF NOT AVAILABLE FROM GSC, EXCEPT FOR VERY SPECIFIC AREAS WHERE I WOULD HIRE STAFF AND UTILIZE CONSULTANTS.

SECTION D: COVERAGE, RELEVANCE, TIMELINESS, AND ACCURACY.

SECTION D1

- 0704 THIS IS A VERY HARD QUESTION TO PROVIDE USEFUL INPUT ON, IN FACT, I QUESTION ITS VALUE. EVERY TIME A MEMBER OF OUR COMPANY ATTEMPTS TO ACQUIRE GSC DATA, THE RESULTS TEND TO PROMPT A DIFFERENT RESPONSE. GENERALISING IS VERY DIFFICULT.
- 0721 DON'T USE.

SECTION D2

- 0704 WHERE RANGES ARE GIVEN THIS IS TO SHOW THE VARIATION BETWEEN "BEST" AND "WORST" SITUATIONS.
 (A) THE GSC HAS BEEN VERY SLOW TO COMMIT DATA TO PAPER AS OPEN FILE REPORTS OR PUBLICATIONS. FOR EXAMPLE, SOME FIELD NOTEBOOK DATA FROM OPERATION PORCUPINE TOOK 10 YEARS TO BE PUBLISHED.
 (B) A SIGNIFICANT NUMBER OF PUBLISHED CROSS-SECTIONS IGNORE RELEASED SUBSURFACE DATA IN STRUCTURALLY COMPLEX AREAS. THE SURVEY GEOLOGISTS INVOLVED IN CALGARY, IN SEVERAL CASES, DO NOT DISCUSS INTERPRETATIONS WITH INDUSTRY COLLEAGUES WHO HAVE ACCESS TO WELL INTERPRETATIONS AND SEISMIC DATA WHICH THEY ARE PREPARED TO TALK ABOUT.
 (C) FREQUENTLY, GSC SUBSURFACE STUDIES PLACE LITTLE RELIANCE ON, AND PAY SCANT ATTENTION TO AVAILABLE WELL LOGS.
 (D) NO QUESTION ADDRESSES MAP COVERAGE; THERE ARE STILL MANY GAPS IN THE MAPPING OF THE WESTERN CORDILLERA (IN TERMS OF PUBLISHED MAPS) AND NO DETAILED COMPILATIONS.
- 0716 RE SECTION C-3 - THE FREQUENCY OF USE WOULD INCREASE IF THE TURNAROUND WAS FASTER.
- 0721 (G)-(N) DON'T USE.
- 0757 COMMENT: RE: ATLANTIC AND EASTERN OFFSHORE - MOST DATA RELEASED TOO LATE FOR ECONOMIC ADVANTAGE - I.E. LAND ACQUISITION.

SECTION D

- 0706 SEE COMMENTS ON C-1 TO C-5.
- 0712 OUTCROP STUDIES IN THE WESTERN CORDILLERA, DEFINITELY NEED REVISION AND UPDATING. THIS AREA IS RAPIDLY BECOMING AN ACTIVE EXPLORATION AREA. SUBSURFACE STUDIES IN THE WESTERN CANADA SEDIMENTARY ALSO NEED REVISION DUE TO THE ACTIVE DRILLING WHICH HAS OCCURRED WITHIN THE PAST COUPLE OF YEARS.
- 0715 THE GSC DOES ITS BEST WORK IN AREAL GEOLOGY AND BED ROCK MAPPING AND THE FOREST IN SUBSURFACE MAPPING. THE GEOLOGIST WORKING ON THE OUTCROP WILL IGNORE SUB-SURFACE INFORMATION ONLY A FEW MILES FROM CRITICAL SECTIONS. THE GSC COULD DO MORE IN CORRELATING THE SURFACE AND THE SUBSURFACE. THE ABOVE DOES NOT HOLD TRUE FOR THE FRONTIER REGIONS SUCH AS THE ARCTIC ISLANDS AND EAST COAST OFFSHORE WHERE THE SUB SURFACE DATA ARE USED. THE BEST GSC WORK IS ON STRUCTURE AND TECTONICS.
- 0717 I FEEL THAT MOST OF THE SUB-SURFACE STUDIES ARE BETTER SERVED BY IN-HOUSE GEOLOGISTS.
- 0719 I HAVE USED DASHES FOR AREAS OF NO INTEREST TO US. THE AREAS OF LOW RATING ALL REQUIRE MORE EMPHASIS. THE GSC IS SIMPLY UNDERSTAFFED IN THESE AREAS AND APPEARS TO LACK AN ADEQUATE BUDGET.
- 0723 INDUSTRY NORMALLY HAS PROPRIETARY DATA AND HAS FOLLOWED UP WITH ACQUISITION AND/OR DRILLING BY THE TIME "GOV'T" PUBLISHES THE DATA, THEREFORE LOW RATINGS ON OIL AND GAS. THE SAME COMMENTS ARE APPROPRIATE FOR MAPPING UNDER COLUMN A & B.
- 0724 I HAVE COVERED THE ABOVE ADEQUATELY IN MY PERSONAL ASSESSMENT SENT IN EARLIER.
- 0728 TOPICS D-1CII AND D-1DII RECEIVE LOW MARKS BECAUSE THIS IS A FIELD THAT THE GSC HAS MORE OR LESS FORFEITED TO PROVINCIAL AUTHORITIES AND INDUSTRY. A POLICY I AGREE WITH. HOWEVER SHOULD THE GSC AND NEB REVEAL THEIR BASIC DATA ON P & NG RESOURCE DATA AND INTERPRETATION THEREOF I FEEL THAT WOULD BE BENEFICIAL.
- 0733 OTHER THAN SOME GEOCHEMICAL STUDIES PROJECTS RELATING SPECIFICALLY TO OIL AND GAS EXPLORATION IN THE ARCTIC SEDIMENTARY BASIN ARE NON EXISTENT. FAR TOO MUCH TIME IS STILL TAKEN IN PUBLISHING RESULTS OF FIELD ACTIVITIES. FIELD WORK IS STILL CARRIED OUT IN THE "SCENIC" PART OF THE ARCTIC ISLANDS RATHER THAN THE AREAS THAT ARE BECOMING MORE PERTINENT TO OIL EXPLORATION. THESE LATTER AREAS ARE GENERALLY NOT VERY ATTRACTIVE AREAS TO WORK IN.

- 0736 THE PUBLICATION OF OUTCROP MAPS IS INADEQUATE - ESPECIALLY REGARDING DELAY OF PUBLICATION FOLLOWING FIELD WORK. 1:250,000 MAPS ARE NOT ADEQUATE IN COMPLEX AREAS FOR EXPLORATION PURPOSES AND SHOULD BE REPLACED BY 1:50,000 SHEETS. IN OUR OPINION THIS IS THE MOST IMPORTANT SHORTCOMING OF GSC ACTIVITIES.
- 0737 TIMELINESS IS THE MOST DIFFICULT PARAMETER, HOWEVER, MY PERSONAL BELIEF IS THAT YOUR OPEN FILE PUBLICATIONS DO THE MOST TO PROVIDE TIMELINESS.
- 0742 THE NEED FOR DATA ASSIMILATION AND INTERPRETATION IN THE EXPLORATION AREA IS BOTH LIMITLESS AND IMMEDIATE, WE WOULD LIKE TO HAVE ALL THE TECHNICAL STUDIES POSSIBLE AND HAVE THEM NOW. THE PREPARATION OF TIMELY REGIONAL STUDIES OF THE SUBSURFACE SEDIMENTS WITH INDIRECT ECONOMIC BENEFITS WOULD BE OUR PRIMARY NEED.

SECTION E: FORMAT OF PUBLICATIONS.

SECTION E1

- 0704 (A) (18) OFTEN ARTICLES ARE HURRIEDLY PREPARED HASTILY REVIEWED AND LACK KEY INFORMATION SUCH AS LOCATION DATA. HOWEVER, TO BE FAIR, AUTHORS WILL USUALLY FILL IN SUCH BLANKS ON REQUEST.
(B) GSC LARGE SCALE MAPS GENERALLY SHOW NO CONTROL * AND SO CANNOT BE ASSESSED FOR RELIABILITY IN SPECIFIC AREAS. THIS LACK OF DOCUMENTATION OF DATA AND EMPHASIS ON INTERPRETATION GREATLY LIMITS THEIR USEFULNESS IN CERTAIN CASES.
* I.E. IT IS DIFFICULT TO ASSESS.
- 0712 (B) QUALITY AND STYLE OF MAPPING ARE CONSIDERED TO BE FIRST CLASS FOR THE GEOLOGIC MAPS.
- 0716 (B) AIRBORNE RADIOMETRIC, GEOCHEMISTRY 1:250,000 AND OFFSHORE PARAMETER - NO KNOWLEDGE.
- 0720 (B) SELDOM USE.
- 0721 (A) CURRENT RESEARCH & ECONOMIC GEOLOGY SERIES - NOT AWARE OF / NO USE.
(B) NOT AWARE OF USE OF SURFICIAL GEOLOGY CATEGORIES.
- 0724 (A) CURRENT RESEARCH NEEDS TO BE RE-ORGANIZED ON A TOPICAL OR REGIONAL BASIS. PRESENT FORMAT VERY DIFFICULT TO INDEX FOR COMPUTER DATA STORAGE. KEYWORD INDEX GOOD (1977 OUR LAST RECORD) OR AUTHOR- SUBJECT-TITLE INDEX LIKE THAT OF CSPG.
- 0730 (B) PUBLICATION OFTEN MANY YEARS AFTER WORK COMPLETED.
- 0733 (A) THE FORMAT IS FINE THE TIME-LAG IN PUBLICATION IS DEPLORABLE.
- 0738 (B) WOULD LIKE TO SEE MORE EMPHASIS ON 1:50,000 BEDROCK GEOLOGY MAPPING, IN WESTERN CANADIAN FOLD BELT.
- 0740 COMMENTS: SOME SLOPPY WORK ON SHEETS AROUND BANFF. TOO LONG A DELAY IN PUBLISHING.
- 0757 (A) COMMENT: PERHAPS I AM MERELY USED TO THEM.

SECTION E3

- 0716 RARELY FOR GSC MATERIAL.
- 0717 WE USE A COMMERCIAL CO. FOR LOGS DAILY.

SECTION E4

- 0703 VARIABLE QUALITY OF FIGURES AND TABLES.
- 0712 ONLY LARGE QUANTITIES OF SUPPORTING DATA SHOULD BE ON MICROFICHE.
- 0715 EACH ONE OF OUR GEOLOGISTS HAS A MICROFICHE READER AND WE HAVE TWO READER PRINTERS.
- 0716 HAVE TO TAKE TIME TO RECOPY - CAN'T PHOTOCOPY.
- 0717 THE ONLY WAY TO GO. GREAT SPACE SAVER.
- 0719 A GOOD SYSTEM.
- 0724 READER-PRINTERS ARE IN COMMON USE - COMPANY DOCUMENTS AND WELL FILES ARE MICROFILMED EXTENSIVELY.
- 0730 FICHE AND COMPUTER DISK ONLY WAY TO STORE LARGE QUANTITIES OF DATA. EASY ACCESS, SAVES SPACE.
- 0738 (HOW LARGE?) ALSO, DEPENDS ON ECONOMICS.
- 0742 DATA THAT WOULD NORMALLY BE APPENDED TO A REPORT, OR NOT INCLUDED AT ALL IS CONVENIENTLY FILED AS MICROFICHE WITHOUT ADDING BULK TO THE REPORT OR BEING LOST TO THE USER.
- 0757 COMMENT RE MICROFICHE: I HAVE FOUND THAT MOST GEOLOGISTS USE MICROFICHE ONLY WHEN OTHER SOURCES ARE NOT AVAILABLE, AND THEN ONLY RELUCTANTLY.

SECTION E6

- 0700 WE CURRENTLY ARE REVIEWING A VARIETY OF DATA PROCESSING, STORAGE & RETRIEVAL SYSTEMS AND IN THE NEAR FUTURE EXPECT TO IMPLEMENT ONE. AT SUCH A TIME YOUR TAPE SYSTEM MAY BE OF USE TO US.

- 0712 I WOULD LIKE TO KNOW WHAT DATA IS AVAILABLE ON GEOSCAN
TAPES. WHAT I AM POINTING OUT HERE IS POSSIBLY
INEFFECTIVE ADVERTISING OF THE POTENTIAL USES OF GEOSCAN
DATA.
- 0716 TAPES HAVE INCOMPATIBLE FORMAT.
- 0724 NOT AWARE OF THIS DATA.
- 0738 ONLY LARGE COMPANIES HAVE FACILITY. CERTAIN AMOUNT OF
DISCRIMINATION.
- 0742 WE CURRENTLY DO NOT MAKE USE OF TAPED DATA, BUT WOULD BE
ABLE TO ADD THE FACILITY IF IT BECAME PRACTICAL.
- 0755 COMMENT RE COMPUTER TAPES: DIDN'T KNOW YOU HAD ANY.
- 0757 COMMENT RE COMPUTER TAPES: DO NOT KNOW ENOUGH ABOUT THEM
TO COMMENT.

SECTION F: ACCESS.
-----**SECTION F1**

- 0715 I PURCHASE ALL OF THE PUBLICATIONS I USE FROM THE MONTHLY CIRCULAR. THE PUBLICATIONS THEN BECOME PART OF THE COMPANY LIBRARY.
- 0737 PRIOR TO OUR SALE OF A SUBSIDIARY OIL COMPANY WE USED ITS LIBRARY A GREAT DEAL. WE NOW MAKE VERY FEW TRIPS TO THE UNIVERSITY OF CALGARY LIBRARY. WE DO NOT HAVE ROOM FOR A LIBRARY IN OUR OFFICE.
- 0757 COMMENT: I USE GOVERNMENT LIBRARY FOR GENERAL INFORMATION ON AVAILABLE DOCUMENTS, THEN PURCHASE FOR COMPANY OR INDIVIDUAL LIBRARY.

SECTION F2

- 0704 THE I.S.P.G. LIBRARY WILL ONLY TAKE ENQUIRIES IN THE MORNING AT PRESENT. THIS IS INCONVENIENT TO INDUSTRY.

SECTION F3

- 0703 INFORMATION SERVICES AT GSC OFFICES - MARGINAL USE.
- 0716 RE INFORMATION SERVICES - INEFFECTIVE RATING IS DUE TO CUTBACK AND CHANGES IN STAFF (LIBRARY NOTE).
- 0717 GSC MONTHLY INFORMATION CIRCULAR - WE ARE NOT PRESENTLY RECEIVING.
- 0721 IF USED, ONLY RARELY.
- 0730 UNTIL RECENTLY PUBLICATIONS LISTED IN THE INDEX WERE FOLLOWED BY A NOTE OF THE N.T.S. AREA COVERED. THIS PRACTICE WAS VERY USEFUL AND SHOULD NOT HAVE BEEN DISCONTINUED. THE N.T.S. LISTING IS FINE BUT DOES NOT REPLACE THE CROSS-REFERENCE WITH THE PAPERS.

SECTION F

0712 NO PROBLEM WITH ACCESS. WE USE THE UNIVERSITY LIBRARY
ALMOST EXCLUSIVELY.

SECTION G: INFORMAL OUTPUT.
-----**SECTION G1**

0757 UNTIL MY RETIREMENT

SECTION G2

0704 OTHER.

0757 I HAVE FOUND GSC PERSONNEL (GEOSCIENTISTS) TO BE COOPERATIVE AND KNOWLEDGEABLE, THEY HAVE A GOOD RELATIONSHIP (IN CALGARY) WITH THE ENERGY INDUSTRY.

SECTION G3

0733 SOME PERSONNEL PARTICIPATE FREQUENTLY AND WELL; SOME OTHERS VERY INFREQUENTLY AND POORLY.

SECTION G4

0704 PUBLICATION IN OUTSIDE REFERRED JOURNALS GIVES SURVEY AUTHORS THE OPPORTUNITY TO BENEFIT FROM OUTSIDE CRITICISM BY THEIR PEERS.

0712 PUBLISHING OUTPUT IN SCIENTIFIC JOURNALS IS A NECESSARY AND VERY EFFECTIVE METHOD TO OBTAIN A MUCH BROADER EXPOSURE OF GSC PERSONNEL AND THEIR RESEARCH TOPICS. FURTHER, IT ALLOWS DISCUSSION AND POSSIBLE REBUTTAL OF IDEAS PROPOSED.

0733 COMMONLY THIS MATERIAL IS MUCH MORE TIMELY THAN THE LONG DELAYED GSC PUBLICATIONS.

0757 PROVIDED THE JOURNAL IS NOT AN OBSCURE ONE OR WITH VERY LIMITED DISTRIBUTION - I.E. PALAEONTOLOGICAL JOURNALS.

SECTION H: CURRENT RESEARCH AND NEW DIRECTIONS.

SECTION H1

0721 ON? ABOUT? IN REFERENCE TO?

SECTION H2

0703 (C) SEE H-1.

0715 NO ONE KNOWS ABOUT IT, SEE H-1.

0736 A. DON'T TAKE "INERTIA" TO MEAN C.R. IS NOT USED AND APPRECIATED. COMMENTS: MORE 1:50,000 MAP COVERAGE.

SECTION H3

0704 THESE COMMENTS MAINLY REFER TO THE ISPG IN CALGARY; THE BRANCH WITH WHICH WE HAVE THE MOST CONTACT. LOSS OF STAFF IN RECENT YEARS AND BUDGET CUTS HAVE LIMITED THEIR PROGRAMS, SO THESE COMMENTS SHOULD BE READ IN A SYMPATHETIC, RATHER THAN CRITICAL, CONTEXT. WHAT IS NEEDED, I BELIEVE, IS A MAJOR EFFORT AIMED AT SYNTHESIS AND EVALUATION OF ALL THE DATA GATHERED OVER THE YEARS. NOT ONLY SHOULD COMPILATION SURFACE MAPS BE PREPARED, BUT ALSO A SERIES OF SEQUENTIAL PALEOGEOGRAPHIC MAPS OF WESTERN CANADA. THESE SHOULD BE BUILT AROUND ISOPACH FACIES MAPS ILLUSTRATING ALL FORMALLY AND SEMI-FORMALLY DEFINED ROCK STRATIGRAPHIC UNITS, AND A GRID OF BIO-STRATIGRAPHICALLY AND LITHO-STRATIGRAPHICALLY CONTROLLED CROSS SECTIONS. PALINOSPASTIC BASES SHOULD BE PREPARED TO ACCOMMODATE DATA FROM OVERTHRUST AREAS. ONCE THIS TYPE OF SYNTHESIS HAS BEEN DONE, AND DATA GAPS, INCONSISTENCIES ETC. NOTED, I BELIEVE THE GSC WILL BE ABLE TO MOVE FORWARD INTO DETAILED STUDIES OF CLEAR RELEVANCE AND AVOID THE PITFALLS OF AD HOC DECISIONS.

0715 I WOULD LIKE TO SEE MORE GSC PUBLICATIONS ON SUB-SURFACE STRATIGRAPHY AS IN THE 50'S. I ALSO WISH GSC GEOLOGISTS WOULD USE SUB-SURFACE TERMINOLOGY INSTEAD OF INVENTING THEIR OWN.

0716 CERTAIN SURVEY GEOLOGISTS ARE PROMPT AND THOROUGH IN REPORT PRODUCTION, OTHERS ARE UNNECESSARILY SLOW. SURVEY POLICY SHOULD BE DIRECTED TOWARDS MOVING PEOPLE TO SPEED

UP REPORT PRODUCTION. GENERAL NOTE. THIS QUESTIONNAIRE WAS REVIEWED BY A NUMBER OF PEOPLE AND HENCE SOME OF THE REPLIES ARE INCONSISTENT. IN GENERAL, HOWEVER, WE USE GSC BASIC DATA, THE BASIC DATA IS OF GOOD QUALITY, SLOW IN APPEARING AND PRESENTED WITHOUT MUCH CONSIDERATION OR AWARENESS OF HOW IT WILL BE USED. THIS LATTER IS PROBABLY NECESSARY BECAUSE THERE IS NOT MUCH AGREEMENT AS TO WHAT IS DESIRABLE.

- 0717 WE WOULD LIKE TO GET ON THE GEOLOGICAL AND GEOPHYSICAL MAILING LISTS. WE ARE A GROWING CANADIAN CO. AND BECAUSE OF OUR EXPANSION WE ARE FINDING MORE AND MORE NEED FOR THE TYPE OF INFORMATION THAT THE GSC PROVIDES. UNTIL RECENTLY OUR ACTIVITIES HAVE BEEN CONFINED TO LOCAL EXPLORATION AREAS WHERE OUR NEEDS HAVE BEEN ADEQUATELY SUPPLIED BY THE PROVINCIAL GOVERNMENTS AND LOCAL COMMERCIAL FIRMS. THE INERTIA IS THE FAULT OF SMALL COMPANIES LIKE OURSELVES, WHO SOMETIMES ARE NOT AWARE OF ALL THE INFORMATION THAT IS AVAILABLE FROM THE GSC. WE ARE SO BUSY LOOKING FOR OIL AND GAS PROSPECTS THAT WE SOMETIMES NEGLECT THE TECHNICAL AND SCIENTIFIC INFORMATION THAT IS AVAILABLE (AT A REASONABLE COST). MAYBE SOME OF THE LOCAL G.S.C. SCIENTISTS SHOULD ARRANGE MEETINGS WITH THE OIL AND GAS COMPANIES AND EXPLAIN EXACTLY THE ROLE OF THE GSC AND WHAT IT PROVIDES. COMMUNICATION IS ONE OF THE PROBLEMS.
- 0719 MORE COMPREHENSIVE AND FREQUENTLY UPDATED SUITES OF SUBSURFACE MAPS OF THE WESTERN CANADIAN BASIN SHOULD BE MADE READILY AVAILABLE AT A CALGARY OFFICE. THESE MAPS SHOULD BE PUBLISHED AS SINGLE ISSUES OR IN PACKAGES.
- 0725 PERHAPS THE GSC SHOULD CONSIDER THE INTRODUCTION OF TECHNICAL COMMITTEES WHICH INCLUDE OUTSIDE MEMBERS FROM RELEVANT INDUSTRIES. THESE COMMITTEES COULD HELP SHAPE THE PRIORITIES AND DIRECTION OF GSC RESEARCH.
- 0733 IMPROVED DIRECT COMMUNICATION BY GSC MANAGEMENT TO ASSESS AREAS AND LEVELS OF PROJECT INTEREST. ANNUAL POST-FIELD-SEASON SEMINARS TO PRESENT SUMMARIES OF SIGNIFICANT NEW FIELD DATA AND CONCEPTS.
- 0734 I WOULD LIKE TO SEE MORE SUCH PUBLICATIONS AS ECONOMIC GEOLOGY REPORT 31, REPORTS LIKE THIS ONE, OR THE ONE ON "GOLD" ETC. WERE VERY WELL DONE AND ARE EXCELLENT COMPILATIONS FOR REFERENCES OR MINERAL EXPLORATION. I WOULD LIKE TO SEE SOME OF THIS IN OIL & GAS. FOR INSTANCE, A COMPILATION OF KNOWN DATA ESTIMATES OF RESERVES, ETC. ON E. COAST OFFSHORE WOULD BE USEFUL. I WOULD PREFER A COMPENDIUM STYLE OF REPORTS COVERING SPECIFIC REGIONS OR AREAS UPDATED, OF COURSE, IN SUCH PLACES AS MAINLAND NWT MACKENZIE DELTA, E. COAST OFFSHORE, W. COAST OFFSHORE ETC. ETC. AREAS THAT LOOKS INTERESTING FOR FUTURE OIL AND GAS EXPLORATION. MORE

COMMERCIALY ORIENTATED REPORTS WOULD BE USEFUL. IN ADDITION, FURTHER GEOCHEMISTRY AND HYDRODYNAMICS OF W. CANADA SHOULD BE PURSUED. NOT ENOUGH HAS BEEN DONE IN THESE AREAS, AND SEPARATE CONSULTING STUDIES ARE EXTREMELY EXPENSIVE.

- 0743 PLEASE CONTINUE "CURRENT RESEARCH" IT IS ONE OF THE BEST PUBLICATIONS YOU PUT OUT.
- 0750 TOO LONG A DELAY BETWEEN CURRENT RESEARCH AND FINAL BULLETIN, PAPER ETC. TOO MUCH RESEARCH TIME SPENT ON VERY OBSCURE PROJECTS
- 0757 COMMENTS: I HAVE NOT BEEN EXPOSED TO CURRENT RESEARCH FOR ABOUT 3 YEARS, THEREFORE CANNOT COMMENT.

SECTION H

- 0712 I SUGGEST THAT POSSIBLY TWICE A YEAR, EACH GSC DIVISION PRESENT IN CONFERENCE FORM, BOTH COMPLETED AND CURRENT PROJECTS. CONFERENCE TOPICS COULD BE PRE-ADVERTISED WITH ATTENDANCE THUS PROVIDING A MEASURE OF THE USEFULNESS OR TOPICALITY OF THE SUBJECT. GSC PERSONNEL WOULD BE ABLE TO COMMUNICATE DIRECTLY WITH A LARGER NUMBER OF GEO-SCIENTISTS. NEW GSC HARD-COVER OUTPUT COULD BE MADE AVAILABLE. A HIGHER PROFILE APPROACH SUCH AS THIS WOULD PLACE THE GSC IN MUCH CLOSER CONTACT WITH THE OUTPUT USERS PLUS PROVIDE MORE OF THE FEEDBACK OBVIOUSLY NEEDED.
- 0724 SEE PERSONAL OUTLINE ON THIS. SUBMITTED ELSEWHERE AS RESPONSE FROM INDIVIDUAL EARTH SCIENTIST.
- 0742 MORE INFORMAL REPORTS THAT COULD BE UP-TO-DATE AND TIMELY.
- 0755 READ THE RIOT ACT TO SOME PEOPLE| WORKING FOR A COMPANY ACTIVE ON AND OFFSHORE EASTERN ELLESMERE ISLAND A FEW YEARS AGO, I WENT DOWN TO OTTAWA AND REQUESTED ACCESS TO AEROMAG INFORMATION IN THAT AREA BY GSC. AT THAT TIME THE DATA WAS ALMOST 10 YEARS OLD. I WAS REFUSED WITH THE MOTIVATION THAT SOME STUDENT WAS USING IT FOR A PHD. WE OBTAINED SIMILAR DATA LATER ON FROM THE U.S. NAVY AT LOW COST AND NO HASSLE|

THE FOLLOWING CRITERIA WERE USED FOR SELECTING QUESTIONNAIRES
TO BE INCLUDED IN THIS REPORT:

PETROLEUM CONSULTANTS

FORM NUMBERS: "0775 " THRU "0788 "

THIS REPORT PRODUCED -

APR 7, 1981

SECTION B: INTERESTS.
-----**SECTION B**

0783 MOSTLY ALBERTA WESTERN SEDIMENTARY BASIN.

SECTION C: NATURE OF USE OF GSC OUTPUT.
-----**SECTIONS C1 TO C5**

0783 COMPANY LIBRARY CONTAINS MANY GSC PUBLICATIONS AND
REFERENCE IS MADE THERETO RATHER THAN GSC CALGARY OFFICE
- EXCEPT NEW ISSUES.

SECTION C8

0783 QUESTIONABLE. POORLY WORDED - TOO MANY NEGATIVES TO
UNDERSTAND. AVAILABLE ORGANIZATION'S PUBLICATIONS RE:
GAC, EIC, CSEG, CSPG, CWLS, CIMM --ALL GOOD INFORMATION.

0786 BEDROCK MAPS, PUBLICATIONS OF STRATIGRAPHY

SECTION C9

0783 COMMENT: ABOVE, \$200.00 ON DUES TO ORGANIZATIONS
MENTIONED IN C-8.

0786 STAFF \$25,000 CONSULTANT SERVICES \$

SECTION D: COVERAGE, RELEVANCE, TIMELINESS, AND ACCURACY.
-----**SECTION D2**

0783 WHAT DO THESE FIGURES MEAN? COMMENTS: GSC DOCUMENTS ARE CONSIDERED HIGHLY AND EXCELLENTLY ACCURATE. LENGTH OF TIME FOR PUBLICATIONS NOT USEFUL AND/OR ONLY ACCEPTABLE, SHOULD HAVE MORE FIRST GRADE PRACTICAL GEOLOGISTS AND ENGINEERS AND PAY THEIR COMPETITIVE SALARIES COMPARED TO INDUSTRY --OTHERWISE GSC WILL DETERIORATE.

SECTION D

0786 AS IS OBVIOUS FROM THE ABOVE, THE SURFACE MAPS AND STRATIGRAPHIC DATA FROM THE WESTERN CORDILLERA IS GOOD TO EXCELLENT HOWEVER SUBSURFACE STUDIES IN THE WESTERN CANADIAN BASIN ARE EXTREMELY POOR| MAYBE THIS IS NOT THE SURVEY'S JOB BUT NO ONE ELSE, THAT I KNOW, IS DOING IT|

SECTION E: FORMAT OF PUBLICATIONS.
-----**SECTION E1**

- 0783 (A) CONFUSING.
PAPER COPIES WITH ADEQUATE, DETAILED MAPS ARE ADEQUATE.
ELABORATE PRINTING IS NOT NECESSARY.
(B) CONFUSING AGAIN.
GOOD ENGRAVING, TIMELY PRINTING - AND AVAILABILITY SO
CAN BE USEABLE IN FIELD FOR ECONOMIC EXPLORATION. OPEN
FILE REPORTS NOT TOO USEABLE.

SECTION E4

- 0783 COMMENT RE MICROFICHE: YES - IF IT SPEEDS UP PRINTING
AND PUBLICATION AND IS MORE ECONOMICAL.
- 0786 MICROFICHE IS FINE FOR DEALING WITH SPECIFIC PORTIONS OF
DATA BUT FOR A GOOD OVERALL REFERENCE HARD COPY IS
PREFERABLE.

SECTION E6

- 0783 COMMENT RE COMPUTER TAPES: VERY SMALL INDIVIDUAL COMPANY
WITHOUT SOPHISTICATED EQUIPMENT.

SECTION F: ACCESS.
-----**SECTION F1**

0783 BY PURCHASE.

SECTION F2

0783 WHEN AVAILABLE OR PUBLISHED.

SECTION F3

0783 THE ADVANTAGE OF ISPG IN CALGARY IS GREATLY APPRECIATED
AND MEMBERS THEREOF GREATLY RESPECTED AND HELPFUL AND
FRIENDLY.

SECTION G: INFORMAL OUTPUT.
-----**SECTION G1**

0783 THROUGH STRUCTURAL SECTION OF CSPG

SECTION G2

0783 SAME AS G-1.

SECTION G3

0783 YES - DEFINITELY.

SECTION G4

0783 YES. COMMENTS G1-G4 - THE GSC PERSONNEL ARE ALL
DEDICATED SCIENTISTS AND SHOULD BE REGARDED IN SALARY
AND ADVANCEMENT EQUIVALENT TO THE USGS OF UNITED STATES.

SECTION H: CURRENT RESEARCH AND NEW DIRECTIONS.
-----**SECTION H3**

0783 COMMENTS ESSENTIALLY ON PAGES BEFORE. SORRY SO LATE |

SECTION H

0786 I WOULD LIKE TO SEE MORE SUBSURFACE STUDIES DONE IN THE WESTERN CANADIAN BASIN BECAUSE AFTER ALL, ALL THE ROCKS DO NOT OCCUR IN THE MOUNTAINS AND FOOTHILLS. THE LIMITED NUMBER OF PUBLICATIONS THAT DO EXIST ARE, IN MY MIND, QUITE ACCEPTABLE AND GIVE AN EXCELLENT BASE FROM WHICH MORE DETAILED WORK CAN BE DONE BY ANY INDIVIDUAL WISHING TO DO SO.

THE FOLLOWING CRITERIA WERE USED FOR SELECTING QUESTIONNAIRES
TO BE INCLUDED IN THIS REPORT:

GEOTECHICAL & UTILITIES COMPANIES AND CONSULTANTS

FORM NUMBERS: "0800 " THRU "0848 "
 "0851 " THRU "0852 "
 "0938 " THRU "0944 "

THIS REPORT PRODUCED -

APR 7, 1981

SECTION B: INTERESTS.

SECTION B2

0827 NO RECOGNIZED "SPECIALISTS", NIL IN THIS FIELD.

SECTION B4

0827 PRIMARILY ACTIVE IN ONTARIO AND IN CALGARY AND EDMONTON, ALBERTA.

0846 NORTH OF 60 DEGREES.

SECTION B

0802 HYDRO ELECTRIC DEVELOPMENT IN LABRADOR IS A CROWN CORPORATION INVOLVED IN FEASIBILITY STUDIES FOR THE DEVELOPMENT OF THE HYDRO POTENTIAL OF THE LOWER CHURCHILL RIVER IN LABRADOR.

0804 ELECTRIC UTILITY, CROWN CORPORATION PRIMARILY PRECAMBRIAN SHIELD & HUDSON BAY LOWLANDS TERRAIN STUDIES COMPRISE OVERBURDEN THICKNESS AND CHARACTERISTICS, BEDROCK PROFILES AND COMPETENCY AS REQUIRED FOR SITE INVESTIGATIONS FOR GENERATING STATIONS AND FOR THE ROUTING OF TRANSMISSION LINES. AIR PHOTO INTERPRETATION AND GROUND TRUTHING INFORMATION ARE UTILIZED. SOURCES OF INFORMATION INCLUDE GSC PUBLICATIONS AND MAPS.

0809 CONSULTING ENGINEERING SERVICES FOR UTILITIES, MINING, HYDRO & THERMAL POWER, ARCTIC, WATER RESOURCES, AIRPORTS.

0822 WE DO GEOTECHNICAL AND ENVIRONMENTAL STUDIES IN BRITISH COLUMBIA, ALBERTA, NWT AND YUKON.

0825 PLUS INTERNATIONAL.

0834 OFFSHORE SITE INVESTIGATIONS

0844 NB - ENVIRONMENTAL ASSESSMENT COMPANY USES GEOSCIENTISTS AS SUB CONSULTANTS AND, AS E.A. WORK IN THIS AREA INCREASES WILL BE ENLARGING PERMANENT STAFF.

0847 PIPELINE ROUTING, GEOTECHNICAL STUDIES, FOUNDATION

ENGINEERING FOR STRUCTURES ON PERMAFROST.

0851 CONSULTING ENGINEERING RATHER THAN ECONOMIC GEOLOGY.

SECTION C: NATURE OF USE OF GSC OUTPUT.

SECTIONS C1 TO C5

- 0802 CORP. ITSELF, IS NOT A USER OF GSC DOCUMENTS DIRECTLY, BUT ENGINEERING CONSULTANTS EMPLOYED BY CORP. IN ITS CURRENT WORK ACTIVITY ARE.
- 0804 SURFICIAL GEOLOGY AS PERTAINING TO SOIL TYPE AND OVERBURDEN THICKNESS AND THE EXTENT OF BEDROCK OUTCROPS IS OF MAIN INTEREST.
- 0809 GSC MAPS ARE USED AS A SOURCE OF BASIC GEOLOGICAL INFORMATION PARTICULARLY AT OUTSET OF PROJECTS.
- 0825 WORKSHOPS AND EXTERNAL DATA FREQUENTLY INAPPROPRIATE OR NOT PUBLICIZED FOR USAGE.
- 0844 BASIC INPUT TO RESOURCE SURVEYS AND E.A. WORK.
- 0942 WE HAVE REQUESTED, SEVERAL MONTHS AGO, TO BE PLACED ON THE MAILING LIST TO RECEIVE THE MONTHLY INFORMATION CIRCULAR BUT HAVE NEITHER RECEIVED THE SAME NOR BEEN ADVISED WHY NOT. SEVERAL OLDER GSC PUBLICATIONS ON GROUND WATER AND ENVIRONMENTAL GEOLOGY ARE USED IN THE OFFICE AT THE PRESENT TIME BUT WE HAVE NO LISTINGS OF NEW PUBLICATIONS. WE WOULD, HOWEVER, APPRECIATE RECEIVING SUCH LISTINGS IF AND WHEN AVAILABLE. ONLY RECEIVED 3 PAGES.

SECTION C8

- 0804 PRESENT GSC OUTPUT DOES NOT COVER ALL AREAS IN NORTHERN MANITOBA. FIELD PROGRAMS OF OUR OWN OR INFORMATION FROM OTHER SOURCES MAY BE REQUIRED.
- 0809 MAPS & DOCUMENTS SAVE TIME AND EFFORT IN OBTAINING INFORMATION REGARDING BEDROCK AND SURFICIAL GEOLOGY. THIS INFO COULD NOT BE OBTAINED TO DEGREE OF DETAIL AND ACCURACY FOUND IN GSC MAPS AND DOCUMENTS WITHOUT SUBSTANTIAL ADDITIONAL COST AND EFFORT
- 0811 SPECIALIZED GEOLOGICAL DESCRIPTIONS AND MAPS OF SPECIFIC PLACES IN B.C.
- 0812 BEDROCK AND SURFICIAL GEOLOGY MAPS ARE ESSENTIAL TO OUR WORK RE DESIGN OF DAMS, TUNNELS, BRIDGES, ETC. AND, OF COURSE, THESE COULD NOT BE READILY REPLACED AS A BASE FOR OUR DETAILED WORK. COMMENT: REGARDING C6 AND C7

CONSULTING FIRMS SUCH AS OURS GAIN A BENEFIT IN THAT WE ARE ABLE TO USE GEOLOGICAL MAPPING OF THE GSC IN OUR REPORTS FOR WHICH WE ARE PAID. IT IS NOT CLEAR TO ME WHETHER THIS WOULD FALL INTO THE CATEGORY OF "DIRECT ECONOMIC BENEFIT". REGARDING C9, IF THE REGIONAL MAPPING PROVIDED BY THE GSC WAS NOT AVAILABLE TO US, IT WOULD BE IMPRACTICAL FOR US TO PROVIDE IT BECAUSE OF THE DELAYS INVOLVE.

- 0822 CAN BE A MAIN SOURCE AS BACKGROUND MATERIAL FOR SOME OF OUR STUDIES - IF THE INFORMATION WAS NOT AVAILABLE WE WOULD GET ALONG AS BEST WE CAN.
- 0825 AS CONSULTANTS WE CANNOT UNDERTAKE BASIC MAPPING AND ANALYSIS FOR CLIENTS AND EXPECT THEM TO PAY.
- 0834 INFORMAL ADVICE AND DISCUSSION WITH BEDFORD INSTITUTE OF OCEANOGRAPHY.
- 0844 UNKNOWN BUT PROBABLY YES.
- 0847 REGIONAL GEOLOGIC MAPPING OF ARCTIC ISLANDS AND NORTH OF 60 DEGREES ON MAINLAND.
- 0848 JUST STARTED USING GSC SERVICES AS I JUST STARTED UP MY COMPANY.
- 0852 REGIONAL AND LOCAL SURFICIAL GEOLOGY AND BEDROCK MAPPING.

SECTION C9

- 0804 NEITHER A OR B APPLY - WE WOULD USE OUR EXISTING FORCES. AVERAGE ADDITIONAL COST MAY BE \$5,000 - PER ANNUM
- 0809 DIFFICULT TO PUT COST FIGURE IN. THE GSC MAPPING EXPERTISE IS GENERALLY AVAILABLE TO COMPANIES SUCH AS OURS ONLY THROUGH SPECIALIZED CONSULTING SERVICES. THESE ARE AVAILABLE AT A COST BUT THE TIME REQUIRED TO DO SUCH MAPPING WOULD USUALLY MITIGATE AGAINST ITS USE AND OUR PROJECTS WOULD ORDINARILY PROCEED WITHOUT IT.
- 0811 STAFF \$ X CONSULTANT SERVICES \$
- 0822 NOT APPLICABLE.
- 0834 STAFF \$ CONSULTANT SERVICES \$X.
- 0844 STAFF \$ CONSULTANT SERVICES \$X.
DOUBTFUL THAT IT WOULD BE MUCH \$.

- 0847 GENERALLY WE ARE THE OTHER SOURCE. AS GEOTECHNICAL CONSULTANTS WE GATHER TERRAIN AND GEOLOGY-RELATED DATA FOR OUR CLIENTS AND APPLY THAT DATA TO ENGINEERING PROBLEMS. WHERE THE DATA EXISTS, WE PREFER TO RELY ON THE QUALITY MAPPING AND GEOLOGIC INTERPRETATION OF THE GSC. WHERE IT DOESN'T EXIST WE HAVE A NEED TO VISIT THE SITE AND OBTAIN SITE AND LOCAL DATA.
- 0851 STAFF \$ CONSULTANTS SERVICES \$15,000.
- 0852 STAFF \$60,000 CONSULTANT SERVICES \$
DIFFICULT TO ACCURATELY ASSESS THIS QUESTION.

SECTION C

- 0808 STAFF \$ CONSULTANT SERVICES \$X.

SECTION D: COVERAGE, RELEVANCE, TIMELINESS, AND ACCURACY.

SECTION D1

0811 (H),(I) J) DON'T USE THESE.

SECTION D2

0812 (1) MARGINAL SCORES REFER TO GENERAL LACK OF INFORMATION REGARDING PROPERTIES OF IMPORTANCE TO ENGINEERING GEOLOGY.
 (O) NEED FOR UPDATING STRUCTURAL GEOLOGY APPARENT IN SOME OF OUR PROJECT AREAS: KEMANO, NECHAKO, REVELSTOKE.
 (P) MAPPING INCOMPLETE IN SOME AREAS: E.G. QUESNEL RIVER ALSO NECHAKO RIVER AREA NEEDS UPDATING WHERE CHANGE IN COURSE OF CHESLATTA RIVER IN ABOUT 1970 REVEALS PREVIOUSLY COVERED FORMATION (ALSO MUD VOLCANOES HAVE FORMED SUBSEQUENT TO CHANGES IN RIVER COURSE).
 (P. III) COMPREHENSIVE MAPPING RELATING GEOLOGY AND SEISMICITY MIGHT BE IN ORDER.

SECTION D

0804 PUBLICATIONS ARE VERY HARD TO OBTAIN AS SOME ARE OUT OF PRINT OR ARE JUST BEING ISSUED AFTER OUR OWN FORCES HAVE MADE THEIR FIELD INVESTIGATIONS.

0822 IN GENERAL INADEQUATE. WE USE GSC PUBLICATIONS (ESPECIALLY MAPS) AS BACKGROUND OR REGIONAL MATERIAL - OBVIOUSLY THE DATA CANNOT BE AS COMPREHENSIVE OR DETAILED AS IT IS IN SOME COUNTRIES - E.G. BRITISH GEOLOGICAL MAPS 6"-1 MI. - WHERE MATERIAL IS NOT AVAILABLE WE TRY PROVINCIAL SOURCES, OR DO WITHOUT, OR DEVELOP INFORMATION TO AN ACCEPTABLE LEVEL BY AIRPHOTO INTERPRETATION OR FIELD RECCO AT A VERY SKETCHY LEVEL.

0844 UNABLE TO PROVIDE MEANINGFUL ANALYSIS OF USE. WE FIND HARD COPY AND MAPS IN SOME AREAS NOT YET LISTED SOME TIME AFTER STUDY IS FINISHED. OR, SOME OUT OF PRINT. COVERAGE IS SOMETIMES "SPOTTY".

0847 LITTLE INFORMATION ON GLACIAL GEOLOGY IN ARCTIC ISLANDS. TIMELINESS OF GSC CURRENT WORK IS RATED POORLY. BECAUSE OUR WORK IS OFTEN IN THE FRONTIER AREAS SUCH AS THE BEAUFORT SEA, ARCTIC ISLANDS AND ALONG MAJOR PIPELINE

CORRIDORS, WE OFTEN ARE WORKING CONCURRENTLY WITH GSC FIELD TEAMS. UNFORTUNATELY WE ARE SELDOM ABLE TO BENEFIT FROM DETAILED GSC REPORTS OR MAPS UNTIL MANY YEARS AFTER WE'VE COMPLETED OUR OWN WORK. THE TURNAROUND TIME ON GSC FIELD WORK IS TOO LONG. THE ANNUAL "CURRENT RESEARCH" & "FIELD ACTIVITY" REPORTS ARE NOT, GENERALLY, IN SUFFICIENT DETAIL TO BE OF BENEFIT.

0848 I AM NOT REALLY AWARE OF WHAT SERVICES ARE AVAILABLE THROUGH THE GSC. WHICH IS REASON FOR POOR SCORE OF D-1F(A), AND SINCE I AM A NEW USER I WOULD LIKE TO KNOW MORE ABOUT WHAT IS AVAILABLE, HOW TO GET IT, WHERE ETC.

0852 WOULD LIKE TO SEE SYSTEMATIC SURFICIAL GEOLOGICAL STUDIES CARRIED OUT FOR 1:50,000 SCALES OF APPALACHIAN REGION AND SETTLED AREAS OF WESTERN CANADA.

SECTION E: FORMAT OF PUBLICATIONS.
-----**SECTION E1**

- 0804 FORMAT IS NOT ORIENTED TOWARDS ENGINEERING GEOLOGY.
 (B) GEOLOGIC MAPS (BEDROCK) COULD SHOW MORE DETAIL.
- 0812 COMMENTS ON ANY ITEM: MAPPING AVAILABLE COMMONLY TOO
 GENERALIZED TO BE OF MUCH USE TO US. WHERE DETAILED
 MAPPING WOULD BE PARTICULARLY ENLIGHTENING POSSIBLY IT
 SHOULD BE PRESENTED ON SEPARATE MAPS.
- 0822 (A) CONSISTENCY IS A VIRTUE AND QUALITY INDEXING IS VERY
 USEFUL.
- 0844 (A) ORGANIZATION OF SOME REPORTS IS NOT WELL SET UP
 NOTABLY FOR APPLIED USES.
 (B) DON'T USE LATTER CATEGORIES.

SECTION E2

- 0811 BUT WE ARE CONSIDERING OBTAINING A READER.
- 0844 RECENTLY.

SECTION E4

- 0804 WHAT IS AVAILABLE ON MICROFICHE? WHERE CAN IT BE
 OBTAINED?
- 0822 NOT APPLICABLE TO OUR USES.
- 0825 ENCOURAGE THE PUBLICATION OF DATA, ON MICROFICHE
 PARTICULAR NUMERICAL DATA BUT NOT MAPS.
- 0844 EVERYONE PREFERS HARD COPY BUT MICROFICHE USE WILL
 INCREASE IN THE FUTURE. WE SUPPORT DUPLICATE SUPPLY OF
 MATERIAL IF FEASIBLE.

SECTION E6

- 0825 WOULD LIKE TO SEE LISTINGS OF TAPES AND COMPATIBILITY
 FOR DATA EXTRACTION.
- 0844 AGAIN, THIS WILL COME WITH TIME.

SECTION F: ACCESS.
-----**SECTION F1**

0804 DIFFERENT PEOPLE, DIFFERENT SOURCES.

0811 PUBLICATIONS WE NEED BUT DO NOT ALREADY HAVE WE PURCHASE
FROM YOUR OFFICE IN VANCOUVER IF AVAILABLE.

0822 WE HAVE A LIBRARIAN WHO PROVIDES INFORMATION AS
REQUESTED BY THE STAFF.

SECTION F3

0804 THE ANSWER TO F-2 IS BASED ON OUR LOW LEVEL
REQUIREMENTS.

0848 I KNOW VERY LITTLE ABOUT THE ABOVE INFORMATION SOURCES.

SECTION F4

0847 IT IS USELESS.

SECTION G: INFORMAL OUTPUT.

SECTION G2

0809 OTTAWA, CALGARY, EDMONTON.

SECTION G3

0825 CONSISTENT PARTICIPATION IN WORKSHOPS AND CONFERENCES LACKING.

SECTION G4

0811 IT IS AN EFFECTIVE WAY OF PUBLISHING ONLY IF THE MATERIAL IS STILL INDEXED AND PROMOTED (& REPRINTED) SEPARATELY OR INCLUDED IN ANNUAL AND CUMULATIVE INDEXES ETC.

0825 WOULD MUCH PREFER TO SEE GSC PUBLISH THEIR OWN RESEARCH NOT IN JOURNALS AS THESE ARE NOT EASILY ACCESSIBLE AND REQUIRE REPRINT OR XEROXING AFTER PUBLICATION DATE.

SECTIONS G1 TO G4

0804 MOST COMMUNICATION IS BY MAIL. IT APPEARS DIFFICULT TO FIND OUT WHICH PUBLICATIONS ARE AVAILABLE AND WHEN OUT OF PRINT, WHETHER OR NOT THEY WILL BE REPRINTED. SINCE THE GOVERNMENT BOOKSTORE IN WINNIPEG HAS BEEN WITHDRAWN IT HAS BECOME MORE DIFFICULT TO ORDER. THE ENTRIES IN THE OPEN FILE CATALOGUE ARE RATHER CONCISE.

0847 ALTHOUGH WORKSHOPS, CONFERENCES AND OUTSIDE PUBLICATIONS ARE A NECESSARY MEANS OF COMMUNICATIONS, IT APPEARS THAT MORE TIME SHOULD BE DEVOTED TO PREPARATION OF FORMAL GSC REPORTS. IT APPEARS THAT THE GSC MAKES POOR USE OF HIGHLY SPECIALIZED GEOLOGISTS, GEOPHYSICISTS, ETC. AS FIELD TECHNICIANS ON ASSIGNMENTS THAT TAKE TOO MUCH OF THEIR TIME. WITH A GREATER TECHNICAL SUPPORT STAFF, AND EXTENSIVE USE OF UNIVERSITY STUDENTS TO GATHER FIELD DATA, WINTER AND SUMMER, SENIOR GSC STAFF WOULD BE GRANTED THE TIME TO ANALYSE, INTERPRET, COMMUNICATE AND

PUBLISH.

SECTION G

0822 WE SUBSCRIBE TO A VARIETY OF JOURNALS IN THE
GEOTECHNICAL FIELD AND THE PUBLICATIONS BY GSC OFFICERS
APPLICABLE TO OUR INTERESTS. I ASSUME THAT LITTLE
MAPPING DATA IS PUBLISHED IN OUTSIDE PUBLICATIONS.

SECTION H: CURRENT RESEARCH AND NEW DIRECTIONS.

SECTION H2

0811 I WAS NOT EVEN AWARE OF CURRENT RESEARCH. WE WOULD APPRECIATE BEING PLACED ON THE MAILING LIST FOR THIS PUBLICATION.

SECTION H3

0804 UNABLE TO COMMENT AS WE ARE NOT FAMILIAR WITH "CURRENT RESEARCH".

0809 GSC INFORMATION PROVIDED BY DOCUMENTS, MAPS AND PERSONAL COMMUNICATIONS COMPRISE A VALUABLE SOURCE FOR GEOTECHNICAL ENGINEERS ON PROJECT WORK. OUR INTEREST IS PRIMARILY IN SURFICIAL GEOLOGY AND OUR GEOLOGISTS/ENGINEERS ARE ENCOURAGED TO CONSULT PERSONALLY WITH THE SURFICIAL GEOLOGISTS OF GSC. BEFORE THEY GO INTO AN AREA AND ALSO REVIEW THEIR OWN FINDINGS WITH GSC STAFF AS WORK PROGRESSES. ASSISTANCE BY GSC IN THIS REGARD IS EXCELLENT PARTICULARLY IN CALGARY, AND THIS SERVICE IS MOST VALUABLE TO US. DON'T SEE ANY SPECIFIC INNOVATIONS NEEDED. THE ONLY INCONVENIENCE WE FIND IS THAT SURFICIAL MAPPING IS ALSO DONE BY THE PROVINCES AND THIS MEANS WE HAVE TO SEARCH MORE THAN ONE SOURCE TO TRACK IT DOWN. THIS IS MANAGEABLE EXCEPT THAT LESS EXPERIENCED STAFF DON'T KNOW WHICH PROVINCIAL AGENCY LOOKS AFTER IT.

0812 IT WOULD BE USEFUL FOR ME TO BE ADVISED AS TO HOW TO FIND OUT WHO IS THE CURRENT EXPERT IN THE GSC WITH RESPECT TO ANY PARTICULAR MAP AREA. A LIBRARY OF GEOLOGICAL MAPS OF ALL AREAS OF THE WORLD WOULD BE VERY USEFUL IN DEALING WITH PROPOSALS FOR WORK IN OTHER COUNTRIES, AND FOR CARRYING OUT WORK IN OTHER COUNTRIES. MORE DESCRIPTIVE TERMS FOR ROCK AND SOIL THAT CONVEY SOME INKLING OF THEIR PROPERTIES FROM AN ENGINEERING GEOLOGY STANDPOINT WOULD BE USEFUL IN GSC REPORTS.

0822 FROM OUR POINT OF VIEW CONSISTENT CONTINUING QUATERNARY STUDIES WITH UP TO DATE PUBLICATION IS MOST DESIRABLE.

0844 MAKE INFORMATION APPLICABLE AND USEABLE BY WIDER NON SPECIALIST AUDIENCE. MORE RAPID PUBLICATION OF BASIC REFERENCES. KEEP UP USE OF GENERAL INFO. SHEET (MAILER). (GSC MONTHLY INFORMATION CIRCULAR).

0847 JUST MORE AND FASTER.

0852 MORE CONTACTS BETWEEN GSC AND PRIVATE CONSULTANTS WITH POSSIBLE MAPPING TO GSC STANDARDS BY THE PRIVATE SECTOR. WE MAP TERRAIN AND SURFICIAL GEOLOGY IN HUGE AREAS. (CURRENTLY ONE PROJECT OF 25,000 KM2 AND ANOTHER OF 10,000 KM2) AND ALTHOUGH OUR WORK IS OFTEN UNDER BUDGET CONSTRAINTS WE TRY TO PRODUCE A HIGH STANDARD, CONSISTENT MAP PRODUCT. EVENTUALLY MOST OF THIS INFORMATION IS LOST IN OUR CLIENTS FILES. POSSIBLE FOR GSC TO ASSIGN MAPPING TO CONSULTING GEOLOGISTS AND RELATED FIRMS? GENERALLY WE ARE PLEASED WITH AND PROUD OF THE GSC|

THE FOLLOWING CRITERIA WERE USED FOR SELECTING QUESTIONNAIRES
TO BE INCLUDED IN THIS REPORT:

MINING AND MINERAL EXPLORATION CONSULTANTS

FORM NUMBERS: "0900 " THRU "0937 "
 "0945 " THRU "0952 "

THIS REPORT PRODUCED -

APR 7, 1981

SECTION B: INTERESTS.

SECTION B2

0914 NONE. WHEREVER MINES ARE FOUND AND THE GENERAL IDEA OF THE GEOLOGICAL SETTING OF THE DEPOSIT MUST BE FORMULATED.

0950 SECTION B-2 INCLUDES GEOLOGISTS AND MINING ENGINEERS.

SECTION B

0910 OUR FIRM IS STRONGLY METALLURGICAL, WITH ONLY MODERATE TO MINOR GEOLOGICAL AND/OR MINING. ACCORDINGLY IT IS HOPED THAT QUESTIONS C-2 AND C-3 ARE USED TO GIVE A WEIGHTED-AVERAGE IMPACT IN THE REMAINDER OF THIS QUESTIONNAIRE.

0914 FINANCING OF MINING PROJECTS AND MINING COMPANIES.

0923 IN MINING AND IN GEOTECHNICAL CONSTRUCTION (ENGINEERING). WE ARE PRINCIPALLY OCCUPIED WITH BOTH MINING AND WITH ENGINEERING PROJECTS (DAMS, TUNNELS, FOUNDATIONS ETC.) IN THE CORDILLERA; BUT WE ALSO ENGAGE IN CONSIDERABLE SIMILAR WORK IN THE SHIELD, AS WELL AS OIL-GAS AND COAL IN THE PLAINS. ABOUT 20-40% OF OUR WORK IS OVERSEAS.

0927 GEOSTATISTICAL STUDIES AND VARIOUS COMPUTER APPLICATIONS. INCLUDES CHILE, PERU.

0928 GEOTHERMAL EXPLORATION. ALSO INVOLVES IN SOME CONSULTING AND EXPLORATION WORK IN THE WESTERN CONTIGUOUS US AND ALASKA AND OCCASIONAL FOREIGN OFFSHORE (TANZANIA, INDONESIA).

0929 OUR WORK TO DATE HAS INCLUDED ALL OF ABOVE AND WE HAVE EXPERIENCE IN #7, #8, AND #9 AS WELL.

0933 AS CONSULTANTS TO THE MINERAL INDUSTRY OUR COMPANY IS INVOLVED IN MINERAL EXPLORATION AND PROPERTY/MINE EVALUATIONS THROUGHOUT CANADA AND EXTENSIVELY IN THE U.S. WE ARE THEREFORE INTERESTED IN MOST PARTS OF CANADA.

0935 NO CURRENT WORK OUTSIDE.

0949 ALSO IN SOUTHERN ONTARIO

- 0950 * ENGINEERING, DEVELOPMENT MINING, CONTRACT MINING, DIAMOND DRILLING, PROPERTY EVALUATION, EQUIPMENT DESIGN AND MANUFACTURE FOR OIL, COAL AND MINING INDUSTRIES.
- 0952 MANUFACTURER OF MINING EXPLORATION (GEOPHYSICAL AND GEOCHEMICAL) INSTRUMENTATION, MINE GRADE CONTROL EQUIPMENT, GEOMAGNETIC SYSTEMS. ALSO PROVIDE GEOCHEMICAL AND ENVIRONMENTAL ANALYTICAL SERVICES. OUR EFFORT AND SCOPE OF ACTIVITIES DISTRIBUTED OVER CANADA (25%), US (35%), INTERNATIONAL (40%).

SECTION C: NATURE OF USE OF GSC OUTPUT.

SECTIONS C1 TO C4

0950 MATERIAL USED IS VARIED AND RANGES FROM INTENSIVE SPECIFIC STUDIES TO INTERMITTENT MINOR INVESTIGATIONS AND DATA ACQUISITIONS.

SECTION C5

0950 VARYING USE BY SEVERAL INDIVIDUALS.

SECTIONS C1 TO C5

0910 SEE COMMENTS ON SECTION B, RE QUESTION C-2 AND C-3.

0914 TORONTO GEOLOGICAL DISCUSSION GROUP.

0923 AT LEAST SOME REPRESENTATION IF POSSIBLE AT SEMINARS. VERBAL ADVICE (MEETINGS) FROM LOCAL GSC GEOLOGISTS WHENEVER PROJECTS FOR CLIENTS WARRANT.

0927 OUR PERSONNEL MAKE ROUTINE DAILY USE OF GSC AND OTHER GEOLOGICAL, ETC. REFERENCES FOR ALL OF THE USES LISTED ABOVE. THEY ARE NECESSARY IN THE DESIGN OF EXPLORATION PROGRAMS AND INTELLIGENT EVALUATION OF MINERAL DEPOSITS.

0933 WE RELY TO A GREAT EXTENT ON THE MAPS AND OTHER PUBLICATIONS OF THE GEOLOGICAL SURVEY OF CANADA. OF COURSE, WE COULD ALWAYS USE MORE HARD DATA BUT CONSIDERING THE AREAS INVOLVED AND THE SCOPE OF MINERAL EXPLORATION AND GEOLOGICAL ACTIVITY, WE FEEL THE GEOLOGICAL SURVEY DOES A PRETTY GOOD JOB. WORKING IN OTHER JURISDICTIONS, E.G. VARIOUS STATES OF THE U.S. GIVES US A GOOD COMPARISON BETWEEN GSC OUTPUT AND OUTPUT FROM OTHER JURISDICTIONS. IN GENERAL THE GSC COMES OFF VERY WELL.

SECTION C8

- 0905 GSC PUBLICATIONS AND MAPS ARE OF GREAT HELP WHEN INITIALLY GOING INTO A NEW AREA OR OF FINDING NEW AREAS OF INTEREST.
- 0910 ONT. DEPT. MINES AND SIMILAR PROVINCIAL BODIES. ECON. GEOL; GEOL. SOC. A., AAPG, ETC. REPORTS.
- 0919 GEOLOGICAL, AEROMAGNETIC AND TOPOGRAPHIC MAPS ARE VERY BASIC REQUIREMENTS FOR FORMULATING EXPLORATION PROGRAMS.
- 0923 THE GSC DATA IS INVALUABLE TO US WHEN WORKING ON PROJECTS FOR CLIENTS ALTHOUGH IT ISN'T POSSIBLE TO IDENTIFY DIRECT ECONOMIC BENEFITS FROM IT, IF IT WERE NOT AVAILABLE OUR CLIENT'S WOULD HAVE TO PAY US OR SOMEBODY ELSE TO COLLECT IT.
- 0925 BENEFITS ARE INDIRECT - MAPS - PUBLICATIONS AND CURRENT RESEARCH ARE NOT READILY REPLACEABLE.
- 0927 GSC OUTPUT IS OUR MAIN SOURCE OF REGIONAL GEOLOGICAL DATA. THE REGIONAL GEOCHEMICAL AND GEOPHYSICAL DATA COMPILED AND PUBLISHED BY GSC IS ALSO IMPORTANT AND UNAVAILABLE ELSEWHERE.
- 0928 PART OF OUR WORK INVOLVES PREPARATION OF REPORTS ON MINERAL PROSPECTS FOR COMPANIES AND GOVERNMENT AGENCIES AND INDIVIDUALS. GSC DATA IS INVALUABLE AS A GUIDE TO THE GEOLOGICAL SETTING IN NEW AREAS. GSC MAPPING AND SPECIAL STUDIES IS INVALUABLE AND I DO NOT SEE HOW IT COULD BE REPLACED.
- 0929 MUCH OF OUR WORK INVOLVES DETAILED APPRAISAL OF SMALL AREAS. THOUGH THE GSC COVERAGE IS GENERALLY OF THE LARGER AREA AND ON A MUCH SMALLER SCALE THAN WE USE, IT WOULD BE DIFFICULT TO REPLACE THE DATA, IF NOT AVAILABLE.
- 0930 "ECONOMIC BENEFITS" IS IN THE SENSE OF READILY AVAILABLE DATA AS COMPARED TO ACQUISITION BY OTHER MEANS I.E. RESEARCH AND FIELD ACTIVITIES. AVAILABILITY OF BASIC DATA ENABLES RAPID SELECTION OF METHODS OF WORK, EFFICIENT FOCUSING OF EFFORTS, ELIMINATION OF NON-PRODUCTIVE AREAS OR LIKELY TO BE NON-PRODUCTIVE AREAS OF RESEARCH, ET AL.
- 0932 I ASSUME C8 REFERS TO OUT-OF-PRINT PUBLICATIONS.
- 0933 INASMUCH AS WE USE PUBLISHED DATA FROM GSC EXTENSIVELY IN OUR WORK I SUPPOSE IT CAN BE SAID THAT WE DERIVE DIRECT ECONOMIC BENEFIT FROM GSC OUTPUT. OBVIOUSLY SUCH THINGS AS LARGE AREA RECONNAISSANCE PROGRAMS, AEROMAGNETIC DATA, ETC. CAN ONLY BE COMPILED BY AN

ORGANIZATION OF GSC SCOPE.

- 0934 REPORTS ON FIELD MAPPING.
- 0935 DIRECT ECONOMIC BENEFIT INTIMATES DIRECT CASH FLOW. NONE IS DIRECTLY GENERATED. THE ECONOMIC BENEFIT IS BY WAY OF BACKGROUND INFORMATION.
- 0945 COMMENT: ANYTHING COULD BE REPLACED IF THE MONEY WAS AVAILABLE, BUT AN INDEPENDENT DOES NOT HAVE ACCESS TO THAT SORT OF FUNDING.
- 0946 COMMENT: DIRECT ECONOMIC BENEFIT COMES FROM UTILIZING COMPILED DATA TO SUGGEST ON-GOING WORK OR TO PERMIT ILLUSTRATION OF CONCEPT WITHOUT THE NECESSITY OF DOING THE BASIC WORK. HISTORICALLY GSC MAPS ARE THE MOST USEFUL OUTPUT OF GSC.
- 0947 COMMENT: OUT OF PRINT MAPS AND PUBLICATIONS.
- 0949 MOST OF DATA COULD BE REPLACED BUT IT IS A MATTER OF ECONOMICS.
- 0950 ITEMS USED AS GEOLOGICAL MAPPING AND ACCOMPANYING DESCRIPTIVE MATERIAL.

SECTION C9

- 0905 A LARGE PORTION OF OUR WORK IS DONE IN ONTARIO AND SOME IN QUEBEC. ONTARIO IS VERY WELL COVERED BY THE OGS. IT IS DIFFICULT TO SAY WHAT EFFECT REPLACEMENT WOULD HAVE ON OUR COMPANY WHICH IS A CONSULTING FIRM.
- 0910 STAFF \$ CONSULTANT SERVICES \$1,000.
WOULD MEAN MORE LEGWORK; HOWEVER, GENERALLY A SEARCH OR BROWSE THEN GSC DATA IS UNDERTAKEN AS PART OF A GENERAL SEARCH, TO CROSS-CHECK OR OBTAIN FURTHER INFO.
- 0914 NOT APPLICABLE.
- 0919 HIRE MORE STAFF - CONSULTANT SERVICES - UNKNOWN. THE BEST SOURCE FOR GEOLOGICAL, AEROMAG AND TOPO MAPS OF 1:50,000 TO 1:250,000 SCALE IS THE GSC. THESE CANNOT BE REPLACED FROM OTHER SOURCES EASILY. OTHER GEOLOGICAL DATA COULD PROBABLY BE OBTAINED FROM HIRING CONSULTANTS, BUT THE COSTS WOULD BE ASTRONOMICAL FOR AN ORGANIZATION OF GEOPHYSICISTS LIKE OURSELVES.
- 0921 A GENERAL MANNER THE OUTPUT OF EACH GSC PUBLICATION CANNOT BE REPLACED BY INDUSTRY AND/OR PROVINCIAL MINES

DEPARTMENT. ANY NUMBER ALLOCATED AT THIS TIME WOULD BE GUESSWORK, THE GSC AND ITS EFFORTS FOR THE ENHANCEMENT OF ECONOMIC GEOLOGY CANNOT BE MEASURED IN TODAY'S DOLLARS, I.E. THE CLASSIC MEMOIRS OF THE 40'S - WHAT DOLLAR VALUE DID THEY ADD TO CANADA'S MINERAL INDUSTRY - A MORE APPROPRIATE QUESTION WOULD BE, WHAT WOULD WE HAVE DONE WITHOUT THEM?

- 0922 NOT REPLACED.
- 0923 HIRE MORE STAFF X. CONSULTANT SERVICES DO REGIONAL MAPPING, DISTRICT MAPPING AS WELL AS SUNDRY OTHER SURVEYS.
- 0924 STAFF \$10,000 CONSULTANT SERVICES \$.
- 0925 COMMENT: N/A WE WOULD NEVER REPLACE.
- 0927 I DON'T BELIEVE WE COULD REPLACE GSC OUTPUT.
- 0929 STAFF \$ CONSULTANT SERVICES \$25,000.
COMMENT: GEOCHEMICAL SURVEYS AND AIRBORNE GEOPHYSICAL SURVEYS PRIMARILY.
- 0930 A RATHER NEBULOUS AREA. MAIN RESULT WOULD BE LESSENING OF PRODUCTIVITY, DUPLICATION OF EFFORTS BY VARIOUS COMPONENTS OF THE INDUSTRY, LACK OF STANDARDS OF EXCELLENCE. HAVING BASIC DATA ENCOURAGES VENTURESOMENESS, REMOVES SOME "BLACK VOIDS" THAT DISCOURAGE INVESTIGATION.
- 0933 I DO NOT THINK THAT I CAN REALISTICALLY PUT ANY KIND OF NUMBERS ON THIS PARTICULAR QUESTION, AND I WOULD BE INTERESTED TO SEE WHAT KIND OF NUMBERS ANY OTHER ORGANIZATIONS PUT ON IT. IN ANY CASE I HAVE MY DOUBTS ABOUT THEIR RELIABILITY.
- 0935 REGIONAL GEOLOGICAL AND GEOCHEMICAL MAPPING ARE HARD TO REPLACE BUT THESE ARE DONE OVER SMALL TO MEDIUM SIZE AREAS AS PART OF OUR REGULAR EXPLORATION PROGRAMS. MAPPING AND SAMPLING ARE GENERALLY DONE IN CONSIDERABLY MORE DETAIL THAN G.S.C. WORK.
- 0945 COMMENT: NEITHER OPTION IS AVAILABLE TO AN INDEPENDENT CONSULTANT..
- 0946 COMMENT: I FIND IT IMPOSSIBLE TO QUANTIFY FOR THE COST OF REPLACING G.S.C. MAPS.
- 0947 COMMENT: COPYING COSTS.
- 0949 STAFF \$ CONSULTANT SERVICES \$X
UNKNOWN AMOUNT OF MONEY INVOLVED.

- 0950 VERY HARD TO ASSESS - (I.E. AN ACCURATE EVALUATION OF
ROCK TYPE AND CONDITIONS IN AN AREA MAY ALLOW US TO
SELECT THE BEST TYPE OF DIAMOND BIT FOR A JOB OR CONDUCT
MINING IN A MORE EFFECTIVE MANNER).
- 0952 STAFF \$ CONSULTANT SERVICES \$12,000.

SECTION C

- 0916 HIRE MORE STAFF - \$20,000. CONSULTANT SERVICES

SECTION D: COVERAGE, RELEVANCE, TIMELINESS, AND ACCURACY.

SECTION D2

- 0928 (G) IV) COULD BE GEOTHERMAL RESEARCH: A/4, B/4, C/5.
- 0934 (P) THERE IS LITTLE RECENT OUTPUT IN THE CORDILLERA, EXCEPT IN OPEN FILES, AND THE QUALITY OF REPRODUCTION OF OPEN FILE MAPS IS POOR. THEY ARE DIFFICULT TO READ. THERE IS NOT A UP TO DATE REGIONAL SYNTHESIS OF B.C. OR YUKON.
- 0947 COMMENT: REQUIRE MORE 1:50,000 MAPPING.
- 0951 NEEDS ARE NEVER COMPLETELY FILLED. TIMELINESS IS DEPENDENT ON SPECIFIC NEEDS. EVEN THE OLDEST MAPS AND REPORTS HAVE CONTINUING USEFULNESS E.G. FARIBAULT'S MAPS OF THE NOVA SCOTIA GOLD DISTRICTS ARE STILL VERY USEFUL, ACCURATE AND RELIABLE. MUCH MAPPING AND RE-MAPPING REMAINS TO BE DONE.

SECTIONS D1 TO D2

- 0914 NOT APPLICABLE. WE DO NOT UTILIZE GAC MATERIAL DIRECTLY BUT WE KNOW THAT IT IS USED BY MINING COMPANIES AND CONSULTANTS WHO SUBMIT REPORTS TO US.

SECTION D

- 0919 GENERAL LACK OF 1:50,000 MAPPING IN REMOTE AREAS WHERE LOTS OF MINERAL EXPLORATION IS OCCURRING.
- 0925 COMMENTS: FORMAL OUTPUT USUALLY IS NOT CURRENT|
- 0927 MANY GSC BULLETINS AND MEMOIRS HAVE ONLY CURSORY COVERAGE OF THE MINERAL DEPOSITS IN A GIVEN AREA. MANY OF THE OLD PUBLICATIONS ARE OUT OF PRINT AND UNAVAILABLE - REPRINTING OF ALL OLD MEMOIRS, BULLETINS, ETC. WOULD BE EXTREMELY USEFUL. DETAILED MAPPING IS NOT AVAILABLE FOR MOST AREAS.
- 0929 COMMENTS: QUITE A NUMBER OF REFERENCES WE USE ARE OLD AND TOO SMALL SCALE TO BE OF MUCH MORE THAN BACKGROUND USE.

- 0930 COMMENTS: FOR DISCIPLINES ONE HAS TO MAKE VERY SUBJECTIVE COMMENTS. COLUMN "C" IS DIFFICULT TO ASSESS AND I SUBSCRIBE TO THE VIEW THAT MOST PUBLISHED GEOLOGICAL INFORMATION IS A PROGRESS REPORT RATHER THAN AN ABSOLUTE DEFINITIVE STATEMENT. ONE COMES TO ASSUME THAT GSC DATA HAS WITHSTOOD STRONG EDITORIAL SCRUTINY AND ACCEPTS THE SLOWNESS OF ISSUANCE OF SOME DATA AS NECESSARY PRICE INCURRED IN THE PURSUIT OF "C". SURVEY HAD NOT ATTEMPTED TO BE VERY ACTIVE IN 1:50,000 SCALE MAPPING HENCE THE LOW "SCORE".
- 0935 MORE REGIONAL STUDIES AND GENERAL RE-MAPPING ON 1 250,000 AND 1:125,000 SCALE SHOULD BE UNDERTAKEN. MORE CORRELATION STUDIES ALONG CORDILLERA STRIKE DIRECTIONS SUCH AS IN PAPER 74-47 ATLIN TERRACE.
- 0952 THOSE LEFT BLANK ARE NOT RELEVANT TO OUR ACTIVITIES.

SECTION E: FORMAT OF PUBLICATIONS.

SECTION E1

- 0914 NOT APPLICABLE TO ANSWER.
- 0927 (B) VALUES IN PPM ARE MUCH MORE USEFUL THAN SYMBOLS IN GEOCHEMICAL MAPS.
- 0929 COMMENT ON ANY ITEM TOO FEW 1:50,000 AND 1:250,000 MAPS.
- 0933 (A) IN GENERAL THE HARD COPY PUBLICATIONS ARE OF A PRETTY HIGH STANDARD AND ALTHOUGH, I SUPPOSE, ANYTHING CAN BE IMPROVED UPON, ANY CRITICISM AT THIS STAGE WOULD BE NOT MUCH BETTER THAN NIT-PICKING.
(B) SOME OF THE UNCOLOURED BEDROCK GEOLOGY MAPS ARE DIFFICULT TO READ AND IN OTHERS, PARTICULARLY WHERE THE TOPOGRAPHIC BASE HAS BEEN SCREENED DOWN IMPORTANT TOPOGRAPHIC FEATURES ARE OBLITERATED BY THE HIGHER INTENSITY GEOLOGICAL INFORMATION. IN THIS DAY AND AGE OF HIGH TECHNOLOGY IT WOULD BE NICE TO SEE MORE COLOURED GEOLOGICAL MAPS PUBLISHED. IN SAYING THIS WE REALIZE THAT THE AGE OF HIGH TECHNOLOGY IS ONE ALSO OF HIGH COST AND THE PRODUCT WE GET IS CERTAINLY BETTER THAN NONE AT ALL. I DON'T PARTICULARLY LIKE THE FORMAT OF THE AIRBORNE RADIOMETRIC DATA WHICH AGAIN, I FIND DIFFICULT TO READ, BUT THAT'S PROBABLY JUST A PERSONAL GRIPE.
- 0935 (A) WHEN I LOOK AT OUR BOOKSHELVES I AM IMPRESSED BY THE ATTRACTIVE STANDARDIZED FORMAT OF ECONOMIC GEOLOGY NOT OF THE G.S.C. PUBLICATIONS WHICH ARE EVERY SIZE, COLOUR AND COVER. EVEN THE DIRECTION OF PRINT ON THE SPINES OF PUBLICATIONS IS NOT STANDARDIZED. GEOLOGY AND MAPS SHOULD ALWAYS BE AVAILABLE SEPARATE FROM MEMOIRS ETC.
(B) 1:50,000 AEROMAG MAPS SUCH AS 918G SHEET 1041/7 ARE OF LITTLE USE. HAVE YOU ANY FAITH IN THE ANOMALY AT 58 DEGREES 29'N 128 DEGREES 53'W? PLEASE COMPARE WITH A MAP SUCH AS 5208 SHEET 921/1. METHOD OF SURVEY AND COMPILATION IS THE QUESTION.
- 0947 COMMENT: TOO MUCH ENDS UP IN CURRENT RESEARCH AND SHOULD BE UP-GRADED TO MORE FORMAL AND COMPLETE REPORTS.

SECTION E2

- 0930 SOON TO BE ACQUIRED.

SECTION E3

0914 NOT USED BY OUR DEPARTMENT.

SECTION E4

0914 NOT IN A POSITION TO OFFER AN OPINION.

SECTION E6

0914 NOT IN A POSITION TO COMMENT.

0919 FORMATTING PROBLEMS; PREFER MAPS OF PLOTTED DATA.

0921 OUR ORGANIZATION IS PRESENTLY SETTING UP COMPUTER DATA SYSTEMS AND EXPECT TO UTILIZE GSC COMPUTER TAPES EXTENSIVELY IN 1981.

0927 GSC TAPES ARE WELL FORMATTED AND GENERALLY HAVE GOOD SUPPORTING DOCUMENTATION.

0930 COMMENT RE COMPUTER TAPES. WE ARE IN EARLY STAGES OF ACQUIRING HARDWARE TO ENABLE USE.

0945 COMMENT RE COMPUTER TAPES: I HAVE AN HP-85 COMPUTER WHICH USES STYLE TAPE. HAS ANY THOUGHT BEEN GIVEN TO SETTING UP DATA TRANSFERS FROM STANDARD TO CASSETTE FORMAT?

SECTION F: ACCESS.
-----**SECTION F1**

- 0914 NOT APPLICABLE.
- 0927 WE WOULD LIKE TO EXPAND OUR COMPANY LIBRARY - BUT MANY ITEMS OUT OF PRINT AND UNAVAILABLE.
- 0935 THE G.S.C. LIBRARY IN VANCOUVER SHOULD BE MORE OPEN TO THE PUBLIC XEROX FACILITIES SHOULD BE AVAILABLE AT COST.
- 0952 MANY TECHNICAL DOCUMENTS ARE OBTAINED AT SEMINARS, WORK SHOPS, SYMPOSIUMS ETC.

SECTION F3

- 0914 DON'T READ ANY OF THESE.
- 0935 TOO MANY ITEMS ARE OUT OF PRINT.
- 0946 COMMENT: WHEN INFORMATION NEEDED WE CALL OBVIOUS AUTHORITY. RESPONSE FROM FIELD PEOPLE IS NORMALLY EXCELLENT.
- 0950 PROBABLY AVAILABLE WITHIN THE COMPANY.

SECTION F

- 0933 COMMENT: G.S.C. LIBRARY IN VANCOUVER IS PRETTY GOOD BUT COULD USE MORE WORKING SPACE, AS WELL, SOMETIMES, AS MORE UNDERSTANDING SUPERVISING "WITCHES".

SECTION G: INFORMAL OUTPUT.
-----**SECTION G2**

0951 OTTAWA. YES.

SECTION G3

0930 GSC PARTICIPATION SEEMS TO HAVE DECREASED IN RECENT YEARS. SOME SCIENTIFIC OFFICERS HAVE BECOME TOTALLY INVISIBLE BOTH IN FLESH AND IN PRINT, OTHERS ARE ENTHUSIASTICALLY IN THE FRONT LINE. ARE YOUNGER STAFF MEMBERS BEING LEFT IN THE SHADOWS?

SECTION G4

0929 IN ANSWER TO G4, IT IS ALMOST BY ACCIDENT THAT ONE FINDS THEM. THE ABSTRACTS MENTIONED IN F4 IS THE PROPER IDEA, BUT WAS UNAWARE OF ITS EXISTENCE.

SECTIONS G1 TO G4

0914 WE RUN IN GSC PERSONNEL INFORMALLY AT C/M CONVENTIONS. THEY SEEM TO BE ALERT AND EARNEST.

0927 MOST GSC PERSONNEL ARE HIGHLY COOPERATIVE.

0933 IN GENERAL I FEEL THAT GSC PERSONNEL DO AN EXCELLENT JOB IN COMMUNICATING WITH THE INDUSTRY AND PUBLIC IN GENERAL, PARTICIPATING IN WORKSHOPS, ETC. MY PERSONAL OPINION IS THAT THE GSC IS ONE OF THE FINEST GOVERNMENT SURVEY GROUPS IN THE WORLD. I HOPE THE BUREAUCRATS IN OTTAWA DON'T GET TOO MUCH SAY IN TRYING TO CHANGE IT (SCREW IT UP) |

0934 RE G-4: IF A GSC PROJECT IS WORTH FUNDING IT IS WORTH PUBLISHING BY GSC.

0947 SHOULD BE PUBLISHED BY GSC SO IT IS MORE ACCESSIBLE AND REASONABLY PRICED.

0950 COMMUNICATION DIRECTLY WITH GSC PERSONNEL IS PROBABLY
LARGELY RESTRICTED TO INDIVIDUALS OF PERSONNEL
ASSOCIATION.

SECTION H: CURRENT RESEARCH AND NEW DIRECTIONS.

SECTION H2

- 0922 (F) UNAWARE.
- 0930 ALL OF THESE. CURRENT RESEARCH IS LARGELY AN UPDATING AND IS NOT VIEWED AS THE DEFINITIVE COMMENT ON A TOPIC, HENCE, DOES NOT DRAW CRITICISM AS WOULD AN ARTICLE IN, SAY, ECONOMIC GEOLOGY OR GSC BULLETIN.
- 0950 I FEEL THAT GSC PERSONNEL AND THEIR OUTPUT ARE OF A GENERALLY HIGH CALIBRE.

SECTION H3

- 0910 SINCE OUR FIRM IS ONLY A MINOR USER, WE ARE SATISFIED WITH THE QUANTITY AND QUALITY OF OUT-PUT UTILIZED. THE MAIN "SOURCE" FOR USING THESE DATA IS THE INDIVIDUALS UNIVERSITY TRAINING. THE RELATIVE EASE OF CONTINUING TO USE GSC OUTPUT CONTRIBUTES TO ITS EFFECTIVENESS, AS IT IS AVAILABLE AT UNIVERSITY AND PUBLIC LIBRARIES, AND ITS BEST-SELLERS WERE (STILL ARE?) AVAILABLE THROUGH THE GOVT. BOOKSTORES.
- 0919 MORE ATTENTION GIVEN TO THE GEOPHYSICAL PARAMETERS OF GEOLOGICAL PROCESSES. MORE ATTENTION GIVEN TO THE 'GEOPHYSICS' OF ORE GENESIS. MORE QUANTITATIVE AND QUALITATIVE INTERPRETATION OF GEOPHYSICAL DATA.
- 0923 MORE AND FASTER (PRELIMINARY) PUBLICATION OF DATA AND/OR HYPOTHESES IN OUTSIDE SCIENTIFIC JOURNALS, - SUCH AS THE GSC IS DOING.
- 0929 GSC SALES OFFICES MIGHT HANDLE RELATED PROVINCIAL PUBLICATIONS, AND VICE VERSA. AERIAL PHOTOS OR AT LEAST THE INDEX MAPS SHOULD BE AVAILABLE AT LEAST FOR CONSULTATION.
- 0930 FASTER PRODUCTION OF FINAL REPORTS, ESPECIALLY MEMOIRS, WOULD BE APPRECIATED. UNTIL THE MEMOIR IS ISSUED ONE TENDS TO BELIEVE THAT FURTHER DATA OR INTERPRETATION IS FORTHCOMING. THE MEMOIR IS OBVIOUSLY THE MOST COSTLY AND TIME CONSUMING FORM OF PUBLICATION BUT IS HIGHLY REGARDED AND PRESENTS A STANDARD FOR QUALITY OF OUTPUT IN SCIENCE. I AM NOT AWARE OF OPEN HOUSE OR GEOSCIENCE FORUM TYPES OF EXCHANGES BETWEEN GSC REGIONAL OFFICES (I.E. VANCOUVER) AND INDUSTRY. THIS FORMAT APPEARS TO WORK WELL FOR DIAND.

- 0935 ALL OUT OF PRINT MATERIAL SHOULD BE AVAILABLE BY SPECIAL ORDER. REGIONAL SYNTHESIS ON ROCK UNITS/TECTONIC UNITS SHOULD RECEIVE POSITIVE SUPPORT WITH ATTENDANT 1:25,000 MAPPING AND RE-MAPPING.
- 0946 COMMENTS: MORE EMPHASIS ON REGIONAL GEOLOGY AND PREPARATION OF MAPS.
- 0947 COMMENTS: (1) HAVE INDIVIDUALS PUBLISH THEIR RESULTS IN MORE FORMAL AND COMPLETE FORM AND NOT USE CURRENT RESEARCH AS AN EASY MEANS TO PUBLISH.
(2) UTILIZE OPEN FILE SYSTEM ONLY WHEN NECESSARY. COMPANIES NOT RESIDENT IN CENTRES SUCH AS OTTAWA OR CALGARY DO NOT HAVE CAPABILITY TO CHECK DATA IN OPEN FILE. THEREFORE OFTEN INCUR LARGE COSTS FOR COPYING NON USEFUL DATA.
(3) PRODUCE HARD COPY DATA.
- 0949 I WOULD LIKE TO RECEIVE MORE INFORMATION OF WHAT IS AVAILABLE.
- 0951 A RETURN TO THE FUNDAMENTAL GEOLOGICAL MAPPING OF CANADA, INVOLVING MORE FIELD WORK AND LESS "RESEARCH" AND OFFICE WORK. GEOPHYSICAL AND GEOCHEMICAL WORK IS SUPPLEMENTAL TO THIS, AT LEAST IT SHOULD BE. "SECRET" DOCUMENTS, SUCH AS THAT ON EVAPORITES, PREPARED BY THE GSC FOR THE AEC, SHOULD BE AVAILABLE TO THE PUBLIC WITHIN ONE YEAR, ESPECIALLY SINCE THEY ARE PAID FOR WITH PUBLIC FUNDS.

SECTION H

- 0914 NO APPROPRIATE COMMENT TO MAKE.
- 0919 MORE INTEGRATION OF GEOPHYSICS AND GEOCHEMISTRY IN GSC GEOLOGICAL PUBLICATIONS.
- 0922 DIFFICULT QUESTIONNAIRE TO ANSWER WITH USEFUL ANSWERS.
- 0934 REGARDING THE ROLE OF GSC: BASIC FUNDAMENTAL FIELD WORK OF HIGH QUALITY AND PUBLICATION OF FIELD WORK HAS BEEN AND SHOULD CONTINUE TO BE THE CORNERSTONE OF GSC ACTIVITY. A MAJOR PART OF THIS ACTIVITY SHOULD BE FIELD MAPPING UNTIL 1:250,000 COVERAGE OF CANADA IS COMPLETE AND UNTIL 1:50,000 COVERAGE OF POTENTIAL MINERAL PRODUCING OR GEOLOGICALLY KEY AREAS IS COMPLETE. OF SECONDARY BUT RAPIDLY GROWING IMPORTANCE IS REGIONAL METALLOGENIC .TECTONIC AND STRATIGRAPHIC SYNTHESSES SUCH SYNTHESSES HAVE IMMEDIATE PRACTICAL APPLICATION.

THE FOLLOWING CRITERIA WERE USED FOR SELECTING QUESTIONNAIRES
TO BE INCLUDED IN THIS REPORT:

MINING AND MINERAL EXPLORATION COMPANIES

FORM NUMBERS: "1000 " THRU "1117 "
 "1120 " THRU "1133 "

THIS REPORT PRODUCED -

APR 7, 1981

SECTION B: INTERESTS.

SECTION B3

1105 VANCOUVER & TORONTO EXPL. OFFICES COMMENTS - ABOVE APPLIES TO CANADA ONLY - IS WORLD-WIDE PRODUCER AND EXPLORER, AS WELL AS HAVING OIL AND GAS AFFILIATE AND URANIUM AFFILIATE.

SECTION B4

1065 COMMENTS: CONCENTRATE FOR URANIUM IN THELON AND ATHABASCA BASINS, WORKING IN BASE METALS IN NORTHERN B.C. - YUKON, NORTHERN ONTARIO, NORTHERN QUEBEC AND NEWFOUNDLAND.

1076 COMMENTS: B-4 - PARTICULARLY THE GRENVILLE SUBPROVINCE.

1093 COMMENTS: REPRESENT B.C. - YUKON OPERATIONS - OF COMPANY

1105 COMMENTS - CANADIAN EXPLORATION EFFORTS DIRECTLY TOWARDS BASE METALS AND COAL PRIMARILY, WITH URANIUM SECONDARY.

SECTION B

1000 EXPLORATION AREA COVERS PRECAMBRIAN PARTS OF SASKATCHEWAN, MANITOBA, ONTARIO AND QUEBEC.

1014 OREBODY APPRAISALS, COMPANY EVALUATION WE DEAL WITH ASSIGNMENTS ALL ACROSS CANADA AND ABROAD BUT NOT NORMALLY IN SEDIMENTARY BASINS.

1019 THE 39 GEOSCIENTISTS ARE IN EXPLORATION. THE GEOLOGICAL STAFF OF THE VARIOUS MINES ARE NOT INCLUDED IN THIS COMMENTARY.

1024 COMMENTS: VOLUME OF WORK (HIGHEST TO LOWEST) (1) PRECAMBRIAN (2) APPALACHIAN (3) CORDILLERAN (4) W. SEDIMENTARY BASIN.

1028 COMMENTS: B-3 COMPANY IS ENGAGED IN THE DEVELOPMENT OF A BROAD RANGE OF MINERAL RESOURCES FROM EXPLORATION THROUGH MINING, PROCESSING TO MARKETING ON AN INTERNATIONAL SCALE. THE COMPANY ALSO PROVIDES CONSULTING SERVICES TO PARTNERS AND OUTSIDERS IN THE

INDUSTRY.

B-4 TRADITIONALLY, OUR MAJOR AREAS OF EXPLORATION INTEREST IN CANADA HAVE BEEN IN THE PRECAMBRIAN SHIELD AREAS, CORDILLERA AND APPALACHIANS. MORE RECENTLY OUR INTERESTS HAVE EXPANDED TO ALL GEOLOGICAL TERRAINS.

- 1042 COMMENTS: AS A RESEARCH GEOLOGIST IN A MINERALS EXPLORATION COMPANY IT IS MY RESPONSIBILITY TO DEVELOP NEW EXPLORATION PROGRAMS. THESE ARE BASED ON CONCEPTS DERIVED FROM BOTH NEW GEOLOGICAL IDEAS AND IMPORTANTLY NEW BASIC OBSERVATIONAL DATA, THE FORMER OF WHICH TO SOME EXTENT, AND THE LATTER TO A LARGE DEGREE, ARE DERIVED FROM HISTORICAL AND CURRENT SURVEY PRODUCTS. THE SURVEY IN MY MIND SHOULD BE THE NATIONAL 'CENTRE -OF- EXCELLENCE' OR 'NATIONAL GEOSCIENCE RESEARCH INSTITUTE'. IT SHOULD HAVE THE CAPACITY STAFF AND EQUIPMENT CONSISTENT WITH A FOREMOST OBJECTIVE OF CONTINUING TO PROVIDE THE DATA ON THE GEOLOGY OF THE NATION CONSISTANT WITH MODERN SCIENTIFIC STANDARDS AND KNOWLEDGE. MY PARTICULAR INTERESTS FOCUS ON THOSE GEOGRAPHICAL AND SUBJECT AREAS RELATIVE TO MY PROFESSIONAL POSITION, MOST PARTICULARLY AREA GEOLOGY SUCH AS IN MAPPING REPORTS, AND IN METALLOGENIC STUDIES.
- 1046 GEOSCIENCE INFORMATION SERVICE
- 1047 COMMENTS: WE COVER ALL PRE-CAMBRIAN AND APPALACHIAN GEOLOGY AND A BIT OF WORK IN THE ST. LAWRENCE AND JAMES BAY LOWLANDS. WE DO NO URANIUM EXPLORATION.
- 1080 COMMENTS: B.C. WASHINGTON, NEVADA, MANITOBA, ONTARIO.
- 1089 COMMENTS: BRITISH COLUMBIA, YUKON, WESTERN NORTHWEST TERRITORIES.
- 1111 THIS OFFICE IS THE CO'S BASE FOR BASE METALS EXPLORATION IN MANITOBA- SASKATCHEWAN-NWT. THE CO. HAS OTHER OFFICES FROM WHICH IT CONDUCTS EXPLORATION CANADA WIDE.
- 1115 NORTHWESTERN ONTARIO (WAWA WEST), MANITOBA, SASKATCHEWAN AND ALBERTA ARE INCLUDED IN OUR AREA OF EXPLORATION. 90% BASE METALS, OILS AND/OR URANIUM, 10% INDUSTRIAL.
- 1121 ACTIVITIES MAINLY RESTRICTED TO QUEBEC PROVINCE.
- 1123 WHAT POSSIBLE QUESTION COULD ONE GENERATE FROM THIS PAGE??
- 1124 THE COMPANY BURNS COAL, NATURAL GAS, AND OIL IN ITS THERMAL POWER PLANTS. AT PRESENT, THE PETROLEUM PRODUCTS ARE PURCHASED OUTRIGHT. HOWEVER THE COMPANY IS MUCH MORE INVOLVED IN COAL EXPLORATION AND PRODUCTION.
- 1125 NORTH HALF

- 1126 REPRESENTING THE COMPANY AS EXPLORATION MANAGER AND CONSULTANT FOR MINE AND EXPLORATION GEOLOGISTS.
- 1130 COMMENTS: THREE GEOLOGISTS ARE EMPLOYED IN OUR REGIONAL OFFICE IN KAMLOOPS. APPROXIMATELY 15 GEOLOGISTS/GEOPHYSICISTS ARE EMPLOYED IN OUR HEAD OFFICE IN TORONTO. COMMENTS HEREIN APPLY ONLY TO THE ST. JOSEPH KAMLOOPS REGIONAL OFFICE.

SECTION C: NATURE OF USE OF GSC OUTPUT.

SECTION C2

- 1123 "IMPORTANT USER"; AMBIGUOUS PHRASE, BUT THE USE OF GSC MATERIAL IS "IMPORTANT TO ME AS A USER", OR, RATES BETWEEN "MODERATE" AND "MAJOR".
- 1124 I HAD CONTINUED FILLING OUT THE QUESTIONNAIRE. HOWEVER OUR USAGE IS SO RARE THAT THE ANSWERS WOULD BE MEANINGLESS. THE QUESTIONNAIRE IS THEREFORE INCOMPLETE. OUR USE OF THE OUTPUT WILL DEPEND ON WHAT TYPE OF OUTPUT IS AVAILABLE.

SECTIONS C1 TO C2

- 1092 BOTH COMMENT: DON'T. KNOW SINCE WE DO NOT KNOW DISTRIBUTION OF USER POPULATION.

SECTION C3

- 1047 IF I RESPONDED FOR ALL IN THIS OFFICE, I WOULD CHECK DAILY FOR JUST ABOUT EVERYTHING. CONSEQUENTLY I AM RESPONDING INDIVIDUALLY TO THIS QUESTION.
- 1061 (C) MICROFICHE - NOT COMMON ENOUGH AS YET TO DETERMINE USE.
- 1096 BEDROCK MAPPING IS TO DATE THE SINGLE MOST IMPORTANT FUNCTION OF THE GSC TO OUR ORGANIZATION.
- 1123 WITH 12 ITEMS MARKED AS "WEEKLY" THERE IS A 90% CHANCE THAT I WILL REFER TO SOME GSC DOCUMENT ON EVERY WORKING DAY - THIS - IN FACT, IS ESSENTIALLY CORRECT.

SECTION C4

- 1123 THE DISTINCTIONS BETWEEN THE CLASSES OF INFORMATION IS DIFFICULT TO RIGIDLY DEFINE, HENCE EMPHASIS AS "BASIC REFERENCE" WHICH IS THE FUNDAMENTAL VALUE OF GSC DATA, AND THUS ACTS AS SOURCE OF "SPECIAL DATA - NUMBERS -

IDEAS", ETC.

SECTION C5

- 1046 COMMENTS: CANSDI SERVICE. GSC LIBRARY ACCESSION LIST AND INTER LIB. LOANS. CANMET LIBRARY, PERSONAL INDIVIDUAL REQUESTS.
- 1061 COMMENTS ON C-1 TO C-5: GSC PUBLICATION ARE MOSTLY USED AS A BASIC REFERENCE AND EDUCATIONAL ALONG WITH THE PROVINCIAL PUBLICATIONS.
- 1062 COMMENTS ON C-1 TO C-5: CONFUSION IN PUBLICATION POLICY E.G. AEROMAG MAPS PUBLISHED BY GSC; REGIONAL GRAVITY BY EARTH PHYSICS BRANCH - SHOULD THESE NOT BE PUBLISHED BY SAME BRANCH?
- 1065 COMMENTS ON C-1 TO C-5: GSC INFORMATION IS EXTENSIVELY USED IN SELECTING AREAS FOR MINERALS EXPLORATION. WE FOLLOW OUR LITERATURE SURVEY WITH A VISIT TO THE AUTHOR(S) OF THE MOST PERTINENT MATERIAL.
- 1090 COMMENTS ON C-1 TO C-5: G.S.C. AND B.C. MINISTRY OF E.M & P. R. DOCUMENTS ARE THE BASIS OF OUR PROJECT RESEARCH.
- 1111 WE KEEP IN CLOSE TOUCH WITH GSC PEOPLE WHEN THEY ARE IN THE FIELD IN OUR AREA. (E.G. SNOW LAKE- SHERRIDON-WELDON BAY). ALSO WE CONSULT WITH SPECIALISTS WHEN THEY ARE HERE - OR BY MAIL OR PHONE AT OTHER TIMES.
- 1123 (III) - WRITTEN AND TELEPHONE COMMUNICATIONS AND VISITS TO GSC ESTABLISHMENTS ARE AT LEAST BI-WEEKLY (|) GSC PUBLISHES NUMEROUS PUBLICATIONS FOR CANADIAN GEOSCIENCE COUNCIL (E.G. "CURRENT UNIVERSITY RESEARCH; REPORTS OF STATE OF CANADIAN RESEARCH, ETC. WHICH ARE ANNUAL)
(II) - USUALLY THE GSC ONLY HOSTS ONE OR SO RELEVANT MEETINGS IN ANY ONE YEAR - E.G. "EXPLORATION '77", "METAMORPHIC GEOLOGY OF THE SHIELD", ETC., SO DIFFICULT TO ATTEND MORE THAN ONCE A YEAR| IN FACT THIS IS A DEFINITE AREA WHERE THE GSC IS REMISS; IT WOULD BE A GREAT ASSET TO INDUSTRY TO KNOW THE FUTURE THRUST OF E.G.: - GEOCHEMICAL, GEOPHYSICAL, APPALACHIAN GEOLOGY, RESEARCH AND PROGRAMS AND LIKE EVERY PROVINCIAL SURVEY IN THE COUNTRY THE GSC, MAYBE BY DIVISION, SHOULD PUT ON AN "OPEN HOUSE", A "SHOW & TELL" IN THE FALL TO HIGHLIGHT WHAT THEY HAVE ACHIEVED.
- 1130 WE ALSO USE AIR PHOTOS AND WOULD FIND IT CONVENIENT IF G.S.C. REGIONAL OFFICES WOULD KEEP A COMPLETE SET OF INDICES AVAILABLE FOR REFERENCE AND FOR SALE.

1131 GSC?

SECTIONS C1 TO C5

- 1004 FREQUENCY OF USE VARIES FOR SECTION C-5, PERHAPS NOT AS OFTEN AS MONTHLY BUT CERTAINLY SEVERAL TIMES PER YEAR. THE LOAN OF BOOKS FROM G.S.C. LIBRARY IS APPRECIATED.
- 1014 THESE ARE DIFFICULT QUESTIONS FOR US TO ANSWER. SOME PROJECTS REQUIRE A THOROUGH LITERATURE SEARCH AND IF IN CANADA THIS MAY INVOLVE ALL TYPES OF GSC DOCUMENTS. MANY OTHER PROJECTS INVOLVE VERY LITTLE STUDY OF PUBLISHED INFORMATION. IF IN ONTARIO WE PROBABLY WOULD USE MORE ONTARIO GOVERNMENT PUBLICATIONS THAN GSC ONES.
- 1019 COMMENTS ON C-1 TO C-5. SECTION C-5 IS VAGUE. WE ASSUME THAT EXTERNAL PUBLICATIONS INCLUDE PUBLICATIONS IN TECHNICAL JOURNALS AND PROVINCIAL GEOLOGICAL SURVEYS. DATA OBTAINED FROM MEETINGS WOULD INCLUDE THE PREPRINTS SO OF COURSE THEY ARE USED. THE SOURCES OF THE WRITTEN OR VERBAL ADVICE COULD BE ENDLESS.
- 1043 COMMENTS ON C-1 TO C-5: PUBLICATIONS ON GEOPHYSICS IN SEG & CMJ BY GSC PERSONNEL AND IN CJES BY GSC ARE USEFUL.
- 1093 COMMENTS: G.S.C. DATA, PARTICULARLY GEOLOGICAL BEDROCK MAPPING AND LOCATION AND DESCRIPTION OF MINERAL DEPOSITS FORMS OUR BASIC EXPLORATION DATA IN TERMS OF PLANNED COVERAGE, MINERAL DEPOSIT ASSOCIATION, AND IN SOME INSTANCES, METHOD OF SEARCH.
- 1105 DATA (REGIONAL) IS USED AS BASIC REFERENCE MATERIAL UNTIL MORE DETAILED INFORMATION OBTAINED FROM PROV. GOV'T OR BY IN-HOUSE PROGRAMS.
- 1112 PROVINCIAL PUBLICATIONS
- 1116 COMPANY IS ON THE GOVERNMENT LISTING FOR NEW PUBLICATIONS. UNFORTUNATELY THE ONLY SECTION WE RECEIVE IS ONE MAILING, IN SPITE OF A SPECIFIC REQUEST TO HAVE THE MONTHLY PRINT OUT FOR GEOLOGY - BASE METALS AND ECONOMIC. I DIDN'T REALIZE THE GSC HAD AN ECONOMIC GEOLOGY SERIES.
- 1126 CURRENT AND PAST GSC WORK IS VERY HELPFUL IN PLANNING REGIONAL TYPE PROGRAMS AND DURING SUMMER PROGRAMS ARE USED AS GUIDES TO OUR SUMMER PERSONNEL (STUDENTS).

SECTION C6

- 1111 THOROUGH ANALYSIS OF ALL PUBLISHED GEOLOGICAL AND GEOPHYSICAL DATA (INCL. GSC) IS AN ESSENTIAL FIRST STEP IN ANY EXPLORATION PROGRAM IN A NEW AREA.

SECTION C7

- 1111 EXPLORATION PHILOSOPHY INFLUENCED THROUGH CONTACT WITH GSC SPECIALISTS.

SECTIONS C6 TO C7

- 1032 NOT DIRECT

SECTION C8

- 1000 GEOLOGICAL MAPS AND AEROMAGNETIC DATA - ALTHOUGH WE DO SOME REGIONAL MAPPING AND FLYING OF SPECIFIC AREAS, IT WOULD BE COSTLY TO DO SO IN EVERY CASE.
- 1001 COMMENT: THE PRINCIPAL ECONOMIC BENEFIT IS THE USE OF GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL DATA PURCHASED AT A TINY FRACTION OF THE COST OF COLLECTING SUCH DATA OURSELVES.
- 1005 DOCUMENTS AND CONTACTS CAN HELP TO ORIENT FIELD WORK AWAY FROM UNINTERESTING AREAS AND TOWARDS MORE PROSPECTIVE ONES. THIS SAVES BOTH TIME AND MONEY HENCE THE TICKS ABOVE. IN THE PAST WE HAVE HAD EXCELLENT RESPONSE TO QUESTIONS ON WORK IN PROGRESS IN AREAS WHICH INTEREST US. WE GENERALLY MAKE A POINT OF VISITING AND TALKING TO THE GSC PERSONNEL INVOLVED IN THE AREA AND THIS IS ALWAYS OF VALUE.
- 1009 COMMENT: THE GSC IS NOT INDISPENSABLE. HOWEVER, TO REPLACE ITS SERVICES WILL COST DOLLARS. WHO WOULD FILL THE NEED - THE PROVINCES, DIAND, CONTRACTORS? WHO WOULD EXERCISE QUALITY CONTROL OVER THE WORK?
- 1020 COMMENT: ALL GEOLOGICAL INVENTORY-TYPE PUBLICATIONS.

- 1021 ALL GSC OUTPUT CAN BE REPLACED, HOWEVER, THE COST IN TERMS OF TIME, MONEY AND DUPLICATION OF EFFORT WOULD BE ENORMOUS.
- 1022 COMMENT: REPORTS ON CURRENT ACTIVITY
- 1024 COMMENT: C-6,7 - LONG TERM BENEFIT. C-8 COLLECTION, ASSEMBLAGE AND INTERPRETATION OF GEOLOGICAL - GEOTECHNICAL DATA IS IRREPLACEABLE IN GROSS TERMS.
- 1026 COMMENT: NO DIRECT ECONOMIC BENEFIT BUT CERTAINLY INDIRECT. REPLACEABLE COMPONENTS WOULD INCLUDE ONLY VERBAL CONTACTS.
- 1028 COMMENT: SOME OF THE G.S.C. DATA IS IRREPLACEABLE. THE COMPANY DERIVES AN INDIRECT ECONOMIC BENEFIT FROM THE USE OF G.S.C. DOCUMENTS AND INFORMAL OUTPUTS.
- 1032 COMMENT: DIRECT ECONOMIC BENEFIT NOT LIKELY. INDIRECT IS DEFINITE POSSIBILITY BASED ON USAGES UNDER C-4. C-8 - REGIONAL DATA COMPILATIONS - GEOPHYSICAL - GEOCHEMICAL PROGRAMS ETC.
- 1033 COMMENT: DIFFICULT TO REPLACE REGIONAL MAPPING - REGIONAL GEOCHEMICAL SURVEYS - AEROMAGNETIC SURVEYS.
- 1035 COMMENT: GEOLOGY - MAPPING - EXPLORATION MODELS
- 1036 COMMENT: MAPS ETC.
- 1042 COMMENT: THE VERY CONCEPT OF THE NATIONAL GEOLOGICAL SURVEY IS SO BASIC TO MODERN MINERALS EXPLORATION THAT IT IS VERY DIFFICULT TO ENVISAGE AN ALTERNATIVE COST-EFFECTIVE -AND- QUALITY-ASSURED SOURCE OF FUNDAMENTAL GEOLOGICAL DATA. THE MOST OBVIOUS AMONGST THESE ARE MAPS, LESS SO AREA REPORTS AND LEAST IMPORTANTLY LABORATORY RESEARCH OR IDEA GENERATION.
- 1043 COMMENT: REGIONAL WRAPPING AND REGIONAL AEROMAGNETICS. SINCE WE ARE A SMALL COMPANY - WE NEED THIS DATA FOR GUIDANCE BUT COULDN'T AFFORD TO DO IT OURSELVES.
- 1047 COMMENT (C-6 IN THE SENSE THAT WE ARE RELIEVED OF DOING CERTAIN BASIC WORK) C-8 GEOLOGICAL SYNTHESSES AS PRESENTED IN MEMOIRS. COMMENT: C-9 - QUESTION NOT RELEVANT TO THIS GROUP AS GROUP RELIES MAINLY ON DATA GENERATED BY PROVINCIAL SURVEYS.
- 1050 COMMENT: REGIONAL BEDROCK MAPPING IS THE LEAST EASILY REPLACED AN MOST VALUABLE COMPONENT OF GSC WORK.
- 1055 COMMENT: DETAILED REGIONAL MAPPING
- 1056 COMMENT: MEMOIRS, BULLETINS, AEROMAGNETIC MAPS.

- 1060 COMMENT: MOST GSC PUBLICATIONS COULD NOT READILY BE REPLACED, SUCH AS REGIONAL MAPPING, COMPILATION OF CONFIDENTIAL INFORMATION.
- 1061 COMMENT: I HAVE A COMPLETE LIBRARY OF GSC PUBLICATIONS FROM 1853 (REPORT OF PROGRESS)
- 1062 COMMENT: REGIONAL GEOCHEMICAL DATA GEOLOGICAL AND OTHER MAPS, REGIONAL GEOLOGICAL REPORTS AND RESEARCH DATA
COMMENT: MOST COMPONENTS WOULD BE DIFFICULT TO REPLACE WITHOUT ADDING STAFF FOR RESEARCH AND CONTRACTORS TO PROVIDE REGIONAL AIRBORNE GEOPHYSICS, GEOCHEMISTRY. COST WOULD BE PROHIBITIVE.
- 1065 COMMENT: THE BENEFIT DERIVED IS THE COST AND TIME SAVING RESULTING FROM NOT HAVING TO DO THE WORK OURSELVES, E.G. REGIONAL MAPPING.
- 1068 COMMENT: QUESTION RATHER VAGUE.
- 1069 DIRECT APPLICATION TO MINERALS EXPLORATION PROGRAMS.
- 1070 COMMENT: BASIC GEOLOGICAL INFORMATION PUT OUT BY THE GSC IS INVALUABLE TO THE EXPLORATION GEOLOGIST.
- 1077 RECONNAISSANCE GEOPHYSICAL AND GEOCHEMICAL SURVEYS WE DO OURSELVES, ALBEIT IN FAIRLY RESTRICTED AREAS DUE TO THE HIGH UNIT COST. THERE IS A NO SUBSTITUTE FOR OTHER GSC DOCUMENTS.
- 1078 COMMENT: DON'T UNDERSTAND WHO EXCEPT ANOTHER GOVERNMENT BUREAU WOULD REPLACE DATA UNDER C-8.
- 1082 COMMENT: I FIND THE GSC - PROVINCIAL OF GEOCHEMICAL MAP SETS OF CONSIDERABLE USE. IT IS ALSO USEFUL TO REFER TO THE REPORT OF ACTIVITIES, AND CONTACT THE RESPECTIVE SCIENTISTS AS REQUIRED.
- 1087 COMMENT: OUR MAIN USE OF GSC PRODUCTION IS FOR GEOLOGIC BACKGROUND TO PLAN AND IN SOME CASES HELP CONDUCT REGIONAL BASE METAL EXPLORATION. CLEARLY NO ONE COULD READILY REPLACE THE GSC'S REGIONAL MAPPING PROGRAMS.
- 1088 COMMENT: MOST DATA COULD BE PHOTOCOPIED OR REFERENCED AT A LIBRARY.
- 1089 COMMENT: VIRTUALLY ALL GSC OUTPUT USED IS NOT OTHERWISE AVAILABLE.
- 1090 COMMENT: IT WOULD BE A MONUMENTAL TASK FOR ANY ORGANIZATION TO DUPLICATE A CENTURY OF REGIONAL MAPPING IN THE CORDILLERA.
- 1092 QUESTIONS ARE AMIBIGUOUS - WE DON'T COPY AND SELL GSC

DOCUMENTS| COMPANY BENEFITS IN HAVING A GEOLOGY/
GEOCHEM/ GEOPHYSICS DATA BASE AVAILABLE THUS MINIMIZING
THE COMPANY DATA ACQUISITION COSTS.

- 1093 OUR ALTERNATE TO AVAILABLE G.S.C. DATA WOULD BE TO
PRODUCE IT OURSELVES - COST WOULD BE PROHIBITIVE.
- 1095 GEOLOGICAL DATA IN THE FORM OF WRITTEN MATERIAL OR MAPS
SUPPLIED BY THE GSC WOULD IN MOST CASES BE IMPOSSIBLE TO
COME BY ELSEWHERE.
- 1096 ALL THE MAJOR PUBLICATIONS, BUT ESPECIALLY THE BEDROCK
MAPS, ARE ESSENTIAL.
- 1098 GSC OUTPUT PROVIDES MUCH OF THE BASIC DATA USED FOR
EVALUATION. IF IT WAS NOT AVAILABLE ITS REPLACEMENT
WOULD BE TIME CONSUMING AND EXPENSIVE.
- 1103 RE C-8, ALL PUBLICATIONS WOULD BE DIFFICULT TO REPLACE.
INFORMAL OUTPUT WOULD BE IMPOSSIBLE TO REPLACE.
- 1104 CONTINUED REGIONAL MAPPING IN THE CORDILLERA
(PARTICULARLY IN NWT/YT) IS INVALUABLE. THE GSC IS THE
ONLY BODY THAT CAN SUPPLY THIS INFORMATION, WHICH FORMS
THE BASIC FRAMEWORK FOR ANY GEOLOGICALLY MEANINGFUL
EXPLORATION PROGRAM.
- 1105 GSC MAPS, REPORTS, ETC. ARE OF DIRECT ECONOMIC USE IN
SELECTING AREAS FOR RECONNAISSANCE EXPLORATION PROGRAMS.
GSC 1:250,000 COVERAGE WOULD BE DIFFICULT TO REPLACE.
- 1106 G.S.C. INFORMATION SERVICES PROVIDE OUR BASIC LITERATURE
ON WHICH THE FRAMEWORK OF OUR MINERAL EXPLORATION
PROGRAMS IS BASED.
- 1107 GSC FORMAL AND INFORMAL OUTPUT ALONG WITH PROVINCIAL
OUTPUT ARE ESSENTIAL STARTING MATERIALS FOR COMPILATION
AND PREPARATION OF REGIONAL AND SPECIFIC EXPLORATION
PROGRAMS. THESE ARE THE "FIRST" SOURCE EXAMINED AND
PROVIDE BASIC FRAMEWORK AND IN MANY CASES SPECIFIC DATA.
- 1109 COULD NOT READILY REPLACE GEOLOGICAL AND GEOPHYSICAL
DATA PRODUCED BY GSC.
- 1111 REGIONAL GEOL & GEOPHYS MAPS AND GEOCHEM.
- 1115 FIELD MAPPING ON SCALE 1" = 1 MILE AND 1" = 4 MILES.
- 1116 IF I KNEW WHAT WAS AVAILABLE, I COULD BETTER DECIDE HOW
MUCH BENEFIT WE WERE DERIVING.
- 1117 ALL TYPES OF DATA WHICH SERVE AS BASIC REFERENCE, I.E.
GEOLOGIC MAPS, ECONOMIC GEOLOGY SERIES, ETC.

- 1121 WE COULD NOT REPLACE THE GEOLOGY AND MINERAL INVENTORY DATA OF THE GSC.
- 1123 PRESENTLY NONE BUT THE QUESTIONS ARE: REPLACED AT "WHAT COST?", "WHAT QUALITY?", "WHAT COMPREHENSIVE BASIS?", AT WHAT UNIFORMITY OF COVERAGE?". THEN ONE ASKS, WOULD THE GAP BE REPLACED BY THE PROVINCES, IN WHOLE OR IN PART, AND BY DIANA?
- 1125 REGIONAL MAPPING AND METALLOGENIC STUDIES
- 1127 REFERENCE TO C-6 AEROMAG COVERAGE.
- 1128 COMMENT: GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL MAPS AND REPORTS.
- 1129 ECONOMIC BENEFIT - HOW MEASURE THIS? PROBABLY INDIRECT.
- 1130 COMMENT: VIRTUALLY ALL GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL MAPS.
- 1133 COMMENT: BRING REGIONAL GEOLOGICAL DATA TOGETHER WITH CO-OPERATION OF OTHER COMPANIES WHICH A SINGLE COMPANY COULD NOT DO.

SECTION C9

- 1000 STAFF\$ CONSULTANT SERVICES \$145,000.
COMMENTS: IF AEROMAGNETIC INFORMATION WERE REQUIRED OVER AN AREA OF 4 TOWNSHIPS FLYING AT 1/4 MILE SPACING THE COST COULD AMOUNT TO ABOUT \$3500. RECONNAISSANCE MAPPING OF A SIMILAR 140 SQUARE MILE BLOCK COULD AMOUNT TO \$32,000 OR MORE DEPENDING ON ACCESS. IF THIS WERE DONE ON FOUR PROJECTS THE EXTRA COST WOULD AMOUNT TO \$145,000.
- 1001 STAFF \$999,999.00 CONSULTANT SERVICES \$999,999.00
COMMENT: WE COULD NOT AFFORD TO REPLACE THE GSC OUTPUT THAT WE CURRENTLY ROUTINELY USE. OUR EXPLORATION EFFORTS WOULD BE LESS PRODUCTIVE, AND MUCH OF OUR EFFORTS WOULD BE DUPLICATED BY COMPETITORS ATTEMPTING TO GATHER THE SAME INFORMATION. ONLY THE COMPANIES WITH THE BIGGEST BANKROLLS COULD DO THE FIELD WORK NECESSARY TO COME UP WITH NEW IDEAS AND TO TEST NEW GEOLOGICAL THEORIES.
- 1004 STAFF \$. CONSULTANT \$X.
COMMENT: GSC REGIONAL COMPILATIONS ARE PARTICULARLY USEFUL. THESE ARE DIFFICULT TO DUPLICATE BY INDIVIDUAL COMPANIES.

- 1009 STAFF \$ CONSULTANT \$100,000.
COMMENT: NORMALLY CONTRACT WORK IS AWARDED TO THE LOWEST BIDDER. THAT MEANS THE QUALITY SUFFERS - YOU GET WHAT YOU PAY FOR. RESTRICT CONTRACT SERVICES TO THE MINIMUM THAT CAN BE ADEQUATELY SUPERVISED.
- 1019 COMMENT: C-9 IS VERY DIFFICULT TO ANSWER. ANY SERVICE CAN BE REPLACED BUT IT WOULD NOT BE CANADA'S INTEREST TO DO SO. ADDITIONAL G.S.C. STAFF PREPARED TO SPEND EXTENDED PERIODS IN THE FIELD IS NEEDED.
- 1020 STAFF \$25,000.00. CONSULTANT SERVICES \$X.
COMMENT: PLUS INFRASTRUCTURE COST \$50,000 AT LEAST.
- 1021 STAFF \$X CONSULTANT SERVICES \$X.
COMMENT: IMPOSSIBLE TO PUT A REASONABLE ESTIMATE ON COST OF REPRODUCTION - WHAT DOES IT COST TO RUN THE GSC?
- 1024 STAFF \$X CONSULTANT SERVICES \$X.
COMMENT: C-9 - REPLACEMENT COSTS ARE PROHIBITIVE IF ONE CONSIDERS ALL GSC OUTPUT. HOWEVER, ON A LOCAL SCALE, SOME OF THE DATA COULD BE REPLACED AT "HIGH" COST.
- 1026 STAFF \$ CONSULTANT SERVICES \$X.
COMMENT: REPORT AND MAP DATA OBVIOUSLY CANNOT BE REPLACED. IF VERBAL OR PERSONAL CONTACT WERE NOT AVAILABLE, ONE WOULD HAVE TO AVAIL ONESELF OF OTHER INFORMATION SOURCES - PROVINCIAL, CORPORATE, CONSULTING. COST OF SUCH REPLACEMENT IS VERY DIFFICULT TO ESTIMATE, AND FIGURE WOULD BE MEANINGLESS.
- 1028 STAFF \$X CONSULTANT SERVICES \$
COMMENT: C-9 G.S.C.'S DOCUMENTATION PROVIDES A MAJOR GEOLOGICAL DATA BASE FOR EXPLORATION PLANNING. IT IS DIFFICULT TO QUANTIFY THE COSTS INVOLVED IN REPLACING THEM PER YEAR. IT IS ESTIMATED THAT IN ORDER TO SUSTAIN GRASS ROOTS TYPE OF EXPLORATION PROGRAMS, IT WOULD REQUIRE EXPENDITURES OF THE ORDER OF SEVERAL MILLIONS OF DOLLARS PER ANNUM.
- 1032 STAFF \$50,000. CONSULTANT SERVICES \$100,000.
COMMENT: DIFFICULT TO ASSESS DIRECT COSTS BECAUSE MANY AREAS WHERE GSC DATA IS AVAILABLE MIGHT NOT BE GIVEN CONSIDERATION AT ALL.
- 1033 STAFF \$ CONSULTANT SERVICES \$50,000
- 1036 STAFF \$ CONSULTANT SERVICES \$X.
- 1042 STAFF \$X. CONSULTANT SERVICES \$
COMMENT: THE VERY IDEA OF A COMMERCIAL ALTERNATIVE TO A NATIONAL GEOLOGICAL SURVEY IS ALMOST IMPOSSIBLE TO COST. IT IS VERY UNLIKELY THAT A CORPORATION WOULD UNDERTAKE BASIC MAPPING PRIOR TO EXPLORATION AS THE "REPLACEMENT

COST" RELATIVE TO AN ASSURED MEANINGFUL RESULT WOULD BE UNMANAGEABLE TO ALL BUT THE VERY LARGEST COMPANIES. THE RESULTING DUPLICATION OF EFFORT WOULD BE NATIONALLY MOST WASTEFUL, ENVIRONMENTALLY DAMAGING, ENERGY INEFFICIENT, AND SCIENTIFICALLY MEANINGLESS WITHOUT ACCESS BY AND COMMENT FROM THE GENERAL GEOLOGICAL COMMUNITY. SUCH COMMENTS ARE LESS APPLICABLE TO GEOPHYSICAL- GEOCHEMICAL SURVEYS, LABORATORY RESEARCH, ETC., AND RELATIVELY LITTLE WOULD BE UNDERTAKEN TO DIRECTLY REPLACE PRESENT GSC ACTIVITY, AS MOST CORPORATIONS ALREADY UNDERTAKE THESE IN A MORE DIRECTLY USEFUL AND USABLE MANNER RELEVANT TO THEIR OWN PRIORITIES AND PROGRAMS.

- 1043 STAFF \$40,000. CONSULTANT SERVICES \$ (A) AND CONTRACT SERVICES.
COMMENT: REGIONAL GEOCHEMICAL COULD BE DONE AT ADDITIONAL COST.
- 1046 STAFF \$ CONSULTANT SERVICES \$X
- 1050 STAFF \$100,000 CONSULTANT SERVICES \$100,000.
COMMENT: I FIND THIS ALMOST IMPOSSIBLE TO QUANTIFY. WITHOUT GSC DATA WE WOULD HAVE TO DRASTICALLY MODIFY OUR EXPLORATIONS PROGRAM. THE "ADDED COSTS" LISTED ABOVE ARE PROBABLY MINIMUM FIGURES.
- 1055 STAFF \$X CONSULTANT SERVICES \$X.
COMMENT: CAN'T ESTIMATE.
- 1056 STAFF X CONSULTANT SERVICES \$200,000
COMMENT: IT IS DIFFICULT TO QUANTIFY COST TO FIRM OF REPLACING INFORMATION NOW PROVIDED BY G.S.C. WITHOUT SPECIFYING THE NATURE OF THE INFORMATION. IF FOR EXAMPLE, A REGIONAL GEOLOGICAL MAP HAD TO BE MADE, COSTS WOULD DEPEND ON WHETHER REGIONAL MAPPING CREWS WOULD HAVE TO BE EMPLOYED, NATURE OF PREVIOUS WORK, GEOGRAPHIC LOCATION, ETC.
- 1058 STAFF \$X. CONSULTANT SERVICES \$X.
COMMENT: UNABLE TO REPLACE REGIONAL MAPS AND AIRBORNE DATA BY HIRING MORE STAFF OR CONSULTANTS. GENERAL BACKGROUND DATA SHOULD BE PROVIDED BY GSC.
- 1061 COMMENT: NOT SURE OF THE MEANING OF THIS QUESTION. TO DUPLICATE MEM. WITH BASIC FIELD WORK ETC. WOULD BE PROHIBITIVE.
- 1065 STAFF \$50,000. CONSULTANT SERVICES \$25,000
COMMENT: THESE EXPENDITURES WOULD BE DEPENDENT ON MANAGEMENT'S APPROVAL TO SPEND MONEY IN ESTABLISHING A DATA BASE. THE COMPANY COULD, HOWEVER, RESTRICT ITS ACTIVITIES TO AREAS IN SOUTHERN CANADA WHERE A GOOD DATA BASE PRESENTLY EXISTS.

- 1068 COMMENT: QUESTION VAGUE, SCOPE TOO BROAD TO BE ABLE TO SET A DOLLAR VALUE.
- 1069 STAFF \$40,000. CONSULTANT SERVICES \$60,000.
- 1070 COMMENT: THE JOB OF MAPPING THE GEOLOGY OF CANADA IS MUCH TOO LARGE FOR ANY ONE COMPANY. THE COSTS WOULD BE FAR TOO HIGH TO ESTIMATE.
- 1074 STAFF \$X. CONSULTANT SERVICES \$X.
- 1077 COMMENTS: IT IS HIGHLY UNLIKELY THAT WE WOULD INCREASE OUR BUDGET ALLOCATION FOR SUCH SURVEYS IF THE GSC DISCONTINUED THEM. BESIDES, SURVEY SUPPORT FOR SUCH SURVEYS HAS IN THE PAST BEEN ERRATIC AT BEST, AND HARDLY A SERVICE TO BE COUNTED ON BY INDUSTRY.
- 1078 COMMENT: WOULD PROBABLY BE IMPOSSIBLE TO REPLACE EXCEPT BY SIMILAR TYPE ORGANIZATION - NOT WITHIN COMPANY MEANS.
- 1080 STAFF \$X CONSULTANT SERVICES \$X
- 1082 STAFF \$ CONSULTANT SERVICES \$2,000
- 1087 STAFF \$X CONSULTANT SERVICES \$
COMMENT: SINCE OUR MAIN USE IS FOR REGIONAL WORK THE COSTS WOULD BE QUITE HIGH. WE DO CONDUCT OUR OWN REGIONAL MAPPING PROGRAMS AT A COST OF SOMETHING LIKE \$150,000 PER 4 MILE MAP SHEET, BUT OF COURSE NEVER JUSTIFY DOING THE WHOLE CORDILLERA|
- 1088 COMMENT: TOO HYPOTHETICAL. 250,000 SCALE MAPPING A COVERAGE (GEOPHYSICS) GENERALLY AVAILABLE IN MOST AREAS OF OUR INTEREST. GEOCHEMICAL COVERAGE ONLY AVAILABLE IN VERY LIMITED AREAS AND THIS IS GENERALLY COMPLETED BY INDUSTRY - EVEN THOUGH SIMILAR COVERAGE OBTAINED BY COMPETITORS.
- 1092 COMMENT: ANOTHER VAGUE QUESTION. NO DOLLAR VALUE CAN BE ESTIMATED, VALUE OF DATA LOSS VARIES BY DATA TYPE AND FROM YEAR TO YEAR. REQUIRED DATA WOULD BE ACQUIRED BY WHATEVER MEANS WAS AVAILABLE.
- 1093 SEE ABOVE.
- 1095 ALREADY EXPLAINED IN C8.
- 1096 STAFF \$X CONSULTANT SERVICES \$X.
COMMENT: THE COST WOULD BE ENORMOUS AND EVEN SO THE COVERAGE WOULD BE FAR LESS COMPLETE. WE RECOGNIZE THAT THE SURVEY IS INSTRUMENTAL IN OUR WORK AND IS VIRTUALLY IRREPLACEABLE.
- 1098 STAFF \$75,000 CONSULTING SERVICES \$25,000.

VERY GENERAL|

- 1100 STAFF \$30,000 CONSULTANT SERVICES \$
COMMENT - VERY DIFFICULT TO ANSWER
- 1103 SUCH COSTS WOULD BE HIGHLY VARIABLE AND DIFFICULT TO
ESTIMATE. LOST GSC OUTPUT MIGHT NOT ALWAYS BE REPLACED,
ONE MIGHT BE FORCED TO MAKE DO WITHOUT IT, THEREBY
REDUCING EFFECTIVENESS.
- 1104 STAFF \$ CONSULTANT SERVICES \$25,000
COMMENTS - THIS WOULD HELP TO COVER GEOPHYSICAL (E.G.
AEROMAG.) AND GEOCHEMICAL SURVEYS OF SELECTED AREAS.
- 1105 STAFF \$250,000 CONSULTANT SERVICES \$150,000
COMMENTS - DIFFICULT TO ANSWER - AEROMAGNETIC SURVEYS
AND REGIONAL GEOCHEMISTRY COULD BE DONE PRIVATELY BUT
NOT ON SYSTEMATIC BASIS. ALSO, HOW MUCH OF GAP COULD BE
FILLED BY PROV. GOV'T?
- 1106 STAFF \$ CONSULTANT SERVICES \$50,000
COMMENTS - IF WE WERE TO HIRE MORE STAFF, IN OTHER
WORDS, ANOTHER REGIONAL GEOLOGIST, HIS SALARY WOULD BE
IN THE AREA OF \$50,000 PER YEAR. IT WOULD ALSO BE
ANTICIPATED THAT WE WOULD HAVE TO CONDUCT OUR OWN
REGIONAL MAPPING. THE COST FOR ONE HELICOPTER IN THE
WESTERN CORDILLERA WOULD COST US IN THE ORDER OF \$300 TO
\$400,000 PER YEAR.
- 1107 MOST OF THE OUTPUT IS NOT AVAILABLE ELSEWHERE - THAT
WHICH IS AVAILABLE FROM OTHER SOURCES GENERALLY HAS A
LARGE INPUT FROM GSC DATA TO FORM ITS BASE.
- 1111 STAFF \$50,000 CONSULTANT SERVICES \$50,000.
WOULD INVOLVE THE USE OF STAFF OR CONSULTANTS IN
RECONNAISSANCE MAPPING AND SPECIFIC RESEARCH PROJECTS.
- 1112 USE PROVINCIAL MATERIAL
- 1115 STAFF \$250,000 X 3 = \$750,000 CONSULTANT SERVICES \$
COMMENTS - COULD NOT READILY REPLACE THE SOURCE OF
INFORMATION. GSC HAS BECOME LESS USEFUL IN RECENT YEARS
BECAUSE OF DECREASING EMPHASIS ON GOOD MAPPING FIELD.
- 1117 STAFF \$25,000 CONSULTANT SERVICES \$25,000
- 1121 STAFF \$50,000.00 CONSULTANT SERVICES \$450,000.00
- 1123 STAFF \$20,000 - AS "GOFER" TO PROVINCIAL SURVEY??
CONSULTING SERVICES - \$50,000.
(A) IS GOING TO BE OF LITTLE HELP, AS THE GSC
CONTRIBUTION IS OF HIGH QUALITY, AUTHORITATIVE DATA -
OPINIONS, HENCE MORE SURVEYS WOULD HAVE TO BE (B)
CONTRACTED OUT (E.G. GRAVITY, MAGNETIC, MAPPING, FOR

SOME LEVEL OF BROAD SCALE COVERAGE; MORE INDIVIDUALS WOULD BE APPROACHED AS CONSULTANTS FOR EXPERT OPINIONS AND ADVICE (OF COURSE 90% WOULD BE EX-GSC PERSONNEL||)

- 1126 STAFF \$24,000.00 CONSULTANT SERVICES \$.
- 1127 STAFF \$ X CONSULTANT \$.
QUESTION CANNOT BE PROPERLY ANSWERED.
- 1128 STAFF \$ X. CONSULTANT SERVICES \$
COMMENT: VERY DIFFICULT TO ASSESS AS AMOUNT OF SPENDING REQUIRED PER YEAR WOULD BE DIRECTLY DEPENDENT UPON LOCATION, NUMBER AND IMPORTANCE OF OUTSIDE EXPLORATION PROJECTS.
- 1129 CAN'T REPLACE
- 1130 COMMENT: QUESTIONS C-8 AND C-9 ARE DIFFICULT TO ANSWER SENSIBLY. ANY COMPONENT CAN BE REPLACED, HOWEVER, THE COST TO REPLACE VARIOUS COMPONENTS IS HARD TO ESTIMATE. AS WE OPERATE ON A FIXED BUDGET, THE EFFECT OF REDUCED G.S.C. INFORMATION WOULD BE A REDUCTION IN THE EFFECTIVENESS OF OUR EXPLORATIONAL PROGRAMS.
- 1131 COMMENT: UNABLE TO ANSWER
- 1133 STAFF \$ CONSULTANT SERVICES \$30,000

SECTION C

- 1002 STAFF \$10,000 CONSULTANT SERVICES \$
- 1009 COMMENTS ON C-1 TO C-5: C5 (B) WRITTEN, TELEPHONE COMMUNICATIONS, VISITS, ETC. TO GSC TAKE PLACE AT LEAST WEEKLY. THE GSC REQUIRES BETTER COMMUNICATION WITH INDUSTRY IN ORDER TO PUBLICIZE ITS RESULTS AND FUTURE PLANS. A FORUM FOR THIS COULD BE AN "OPEN HOUSE" OR A "SHOW & TELL" SIMILAR TO THOSE ORGANIZED EACH FALL BY THE PROVINCIAL SURVEYS.
- 1015 COMMENT: ALL G.S.C. DATA
- 1024 COMMENTS ON C-1 TO C-5: C-1 - GOOD INFORMATION CIRCULAR. C-2 - MAJOR TO IMPORTANT USES. C-3, 4 - CURRENT RESEARCH PROVIDES EXCELLENT VALUE ON NEW INFORMATION WHICH IS RELEASED EARLY. AEROMAGNETIC COVERAGE VERY GOOD.
- 1028 COMMENTS ON C-1 TO C-5: C-5-B - COMPANY STAFF ATTEND THE G.S.C. WORKSHOPS, MEETINGS, SEMINARS ON A SEMI-YEARLY

BASIS. WRITTEN OR VERBAL ADVICE IS SOUGHT GENERALLY ON A QUARTERLY BASIS AND MORE FREQUENTLY DURING THE FIELD SEASONS.

C-3-C POSSIBLY THE DATA TAPES FROM THE G.S.C. OPEN FILE WILL BE USED BY OUR STAFF IN FUTURE.

1042 COMMENTS ON C-1 TO C-5: GSC DOCUMENTS ARE A BASIC DATA SOURCE FOR MANY AREAS, OCASSIONALLY CONTAIN SIGNIFICANT NEW IDEAS, BUT MOST IMPORTANTLY REPRESENT BASIC GEOLOGICAL INFORMATION WITH A VERY LONG PERIOD OF USEFULNESS. INDEED IT IS HARD TO FORESEE WHEN MOST OF THE BASIC DATA IN THESE PUBLICATIONS WILL EVER STOP BEING USEFUL. IT IS THEREFORE IMPERATIVE THAT AVAILABILITY TO THE DATA BE MAINTAINED. IDEAS WITH AN OBVIOUSLY SHORTER 1/2-LIFE ARE PERHAPS LESS IMPORTANT.

SECTION D: COVERAGE, RELEVANCE, TIMELINESS, AND ACCURACY.

SECTION D1

- 1024 A., E., F.-I. III., H.- I. II. J. X MEANS NOT APPLICABLE.
- 1028 COMMENTS: D-1 IT IS DESIRABLE TO HAVE A STANDARD SET OF MAPS FOR THE ENTIRE COUNTRY AT A SUGGESTED SCALE OF 1 250,000 SCALE BASED ON THE N.T.S. SYSTEM.
- 1061 A) NOT USED
C) NOT USED
D) NOT USED
E) NOT USED
F) NOT USED
H) NOT USED

SECTION D2

- 1005 MAPPING IN WESTERN CANADA, B.C. IN PARTICULAR, AND THE APPALACHIANS IS OUT OF DATE AND NEW PROGRAMS ARE GENERATED AFTER THE EXPLORATION NEED HAS WANED. SEDIMENTOLOGY IN THE WESTERN CORDILLERAN ROCKS IS SUPERFICIAL BUT IS BEING IMPROVED. VERY LITTLE 1:50000 MAPPING IS AVAILABLE WEST OF THE ROCKIES BUT WHERE AVAILABLE E.G. IN MAIN RANGES IS OF EXCELLENT QUALITY.
- 1024 A.,F.,G.-I. II., I., J., K., 1., X MEANS NOT APPLICABLE. COMMENTS: D-1 MORE COVERAGE NEEDED IN APPALACHIAN - MARITIMES REGION. D-2 DEFINETELY MORE WORK NEEDED IN THE FIELD OF METALLOGENESIS AND DEVELOPMENT OF ORE DEPOSIT MODELS/BY TYPE AND DISTRICT. MORE 1:50,000 MAPPING COVERAGE NEEDED IN CERTAIN AREAS OF NWT. OVERALL GSC WORK VITAL IN NWT-YT. PROVINCIAL COVERAGE IS REASONABLY GOOD IN OTHER AREAS.
- 1028 D-2 IN NUMBER OF CASES, THE REGIONAL GEOCHEMICAL DATA IS NOT REPRODUCABLE.
- 1035 COMMENT: NOT ENOUGH BASIC GEOLOGY DONE. NOT ENOUGH GEOLOGICAL STUDY OF ORE DEPOSITS. TOO MUCH DOLLARS SPENT ON REGIONAL GEOCHEMISTRY AND RADIOMETRICS.
- 1042 COMMENTS: I AM NOT SURE IN THIS SECTION WHETHER TO ANSWER IN A HISTORICAL OR CURRENT CONTEXT, AND HAVE TRIED TO BALANCE MY ANSWER BETWEEN THEM. THE LOW SCORES UNDER "NEEDS SERVED" REFER LARGELY TO CURRENT OUTPUT: OTHER SOURCES ARE AVAILABLE FOR MUCH OF THE MATERIAL

WHERE I HAVE GIVEN A '3' SCORE, SO I FEEL THAT THE GSC MAKES A REASONABLE CONTRIBUTION IN THESE AREAS; THE '1' SCORES REFER TO A BASIC ABSENCE OF FUNDAMENTAL CURRENT PRODUCTION IN THESE AREAS. THE '1' SCORES UNDER 'TIMELINESS' ARE A SEVERE CRITICISM OF THE LENGTH OF TIME TO PUBLICATION, OR EVEN TOTAL ABSENCE OF OUTPUT ON SOME PROGRAMS KNOWN TO HAVE BEEN GOING ON FOR MANY YEARS. IN ACADEMIC QUALITY THE GSC OUTPUT IS OVERALL EXCELLENT, AS APPROPRIATE TO A NATIONAL GEOSCIENCE RESEARCH INSTITUTE. MOST BASIC GEOLOGICAL DATA HAS A VERY LONG USEFUL PERIOD, EVEN FOLLOWING REMAPPING, OR OLDER OBSERVATIONS MAY AGAIN BECOME CURRENT AND OF INTEREST; RESOURCE STUDIES AND APPRAISALS ARE OF LESS CONTINUING BENEFIT AS ECONOMIC CONDITIONS RAPIDLY CHANGE THE VALIDITY OF ALMOST ALL SUCH STUDIES.

- 1043 (D) NEED MORE OF.
(J) (EARTH PHYSICS BRANCH)
COMMENT: NEED LONG RANGE LABORATORY PROGRAM ON THE PHYSICAL PROPERTIES OF ROCKS - ELECTRICAL ETC.
- 1046 COMMENT: TIMING OF ACTIVITIES - ALWAYS CRITICAL - MORE CURRENT E.G. GSC 80-1A, B, C, - SERIES FORMAT HELPFUL.
- 1047 (H) COMMENTS: WE HAVE BEEN SEARCHING FOR "TIN GRANITES" IN THE APPALACHIANS AND DATED YOUNG ROCKS MIGHT HAVE BEEN USEFUL IN AREA SELECTION FOR DETAILED EXPLORATION. GSC TENDS TO FOLLOW RATHER THAN LEAD IN TERMS OF NEW AREAS TO EXPLORE AND IN TERMS OF NEW THINGS TO EXPLORE FOR. GSC WORK IS USEFUL IN REFINING CONCEPTS IN EXPLORATION BUT SELDOM GENERATES THEM.
- 1050 COMMENTS: DESPITE THE ANNUAL REPORTS OF ACTIVITIES (WHICH ARE VERY MUCH WELCOMED) PUBLICATION TIMES ARE STILL GENERALLY FAR TOO LONG. IT SHOULD BE POSSIBLE TO PRODUCE PRELIMINARY UNCOLOURED GEOLOGICAL MAPS WITHIN THREE MONTHS OF THE END OF THE FIELD SEASON - SEVERAL PROVINCIAL GOVERNMENTS HAVE SHOWN THIS CAN BE DONE|
- 1056 COMMENT:
(1) IN MINERAL EXPLORATION OUR NEEDS ARE GENERALLY SERVED WELL. LITTLE G.S.C. PUBLISHED MATERIAL IS USED IN OIL AND GAS EXPLORATION.
(2) CANNOT COMMENT ON TIMELINESS IN SEVERAL CASES. IN THE CASE OF REGIONAL SYNTHESSES OF GEOLOGICAL MAPPING, PUBLICATION CAME OUT FAR TOO SLOWLY. AS A RESULT WE USUALLY DO OUR OWN REGIONAL EXPLORATION COMPILATIONS.
(3) CANNOT COMMENT ON USEFULNESS OF INFORMATION IN TERMS OF TIME BECAUSE OF VARIETY.
- 1061 A) NOT USED
F) NOT USED
H) NOT USED
I) NOT USED

J) NOT USED

K) NOT USED

I) NOT USED

COMMENT: UPDATING OF DATA IS ALWAYS NEEDED AS INDUSTRY MAKES NEW DISCOVERIES AND PLACES ON PRODUCTION NEW MINES.

- 1062 COMMENT: TOPO MAPS AT 1:50,000 NON EXISTANT FOR MANY AREAS - SPECIFICALLY NORTH OF 60 DEGREES.
- 1065 COMMENT: IT TAKES TOO LONG FROM THE TIME THE GSC'S FIELD INFORMATION IS COMPILED TO THE DATE OF PUBLICATION. PROVIDING INFORMATION TO THE USER BEFORE IT BECOMES STALE IS THE MAIN CAUSE OF THE MARGINAL OR POOR SCORES RECORDED ABOVE. CURRENT RESEARCH TAKEN ALONG WOULD RATE MUCH BETTER IN THIS REGARD.
- 1069 COMMENT: SUGGESTION PUBLICATIONS SHOULD BE RELEASED QUICKER AND NOT AT THE SACRIFICE OF COLUMN (C).
- 1070 COMMENT: THE OUTPUT OF 1:50,000 AND 1:250,000 GEOLOGICAL MAPPING HAS DECREASED OVER THE PAST FEW YEARS. GEOLOGICAL MAPPING, BE IT DETAILED OR REGIONAL SHOULD BE EMPHASIZED MUCH MORE THAN IT HAS OVER THE PAST SEVERAL YEARS.
- 1074 COMMENT: OF MOST BENEFIT TO US ARE THE GEOLOGICAL MAPS OF THE G.S.C. ALSO VERY BENEFICIAL ARE AEROMAGNETIC AND AERORADIOMETRIC SURVEYS.
- 1076 COMMENT: THE DETAILED AND RECONNAISSANCE MAPPING OF AREAS LIKE VANCOUVER ISLAND IS TAKING TOO LONG AND THE TIME BETWEEN THE FIELD WORK AND PUBLICATION IS TOO LONG.
- 1077 (B) AEROMAGNETIC SURVEYS ARE PROBABLY THE MOST USEFUL TOOL, AFTER THE 4 MILE GEOLOGICAL MAPS, THAT THE SURVEY CAN PROVIDE TO THE EXPLORATION INDUSTRY. THE SURVEY SHOULD GET CRACKING IN THIS DIRECTION. TIMELINESS IN GETTING THE DATA OUT HAS NEVER BEEN THE SURVEY'S STRONG POINT EITHER.
(C) LOW RATING IS DUE TO THE VERY LIMITED GEOCHEMICAL COVERAGE BY GSC IN BC/YUKON. WE HAVE MIXED FEELINGS IN OUR GROUP AS TO WHETHER AND TO WHAT DEGREE GSC SHOULD ENGAGE IN GEOCHEMICAL SURVEYS.
- 1088 COMMENT: (1) MISSING DISCIPLINES NOT REFERENCED, EXCEPT ON VERY RARE OCCASIONS.
(2) GEOCHEMICAL SURVEYS - WE WERE INVOLVED IN ONE UNFORTUNATE PROGRAM IN TIMMINS AREA IN WHICH HIGH COPPER - ZINC VALUES IN TILL FROM BORE HOLE SAMPLES LATER PROVEN TO HAVE BEEN UNINTENTIONALLY SALTED BY BRASS FILINGS. COVERAGE OF GEOCHEMICAL SURVEYS EITHER AT TOO LARGE A SPACING OR TOO ISOLATED REGIONALLY TO BE OF MUCH BENEFIT TO EXPLORATION SECTOR.

- 1089 COMMENT: MANY REGIONS AND DISCIPLINES WERE NOT RATED BECAUSE GSC OUTPUT REGARDING THEM IS SELDOM OR NEVER USED.
- 1090 COMMENT: - DURATION OF USEFULNESS IS DIFFICULT TO QUANTIFY BECAUSE OF CONSTANTLY CHANGING IDEAS AND TECHNOLOGY.
- ACCURACY IS AS GOOD AS CAN BE EXPECTED, CONSIDERING THE SCALE OF PROJECTS, ALTHOUGH ERRORS ARE FREQUENT.
- 1093 COMMENTS: OUR BASIC NEED IS FOR UP-TO-DATE GEOLOGICAL MAPPING SURVEYS. - GEOPHYSICAL SURVEYS IN WESTERN CANADA APPEAR TO BE NON-EXISTENT IN RECENT YEARS - E.G.: NO RECENT AEROMAGNETIC COVERAGE. - METALLOGENIC STUDIES ARE BARELY ADEQUATE - NO DATA OR VERY LITTLE DATA PREPARED AS TO EXPLORATION PARAMETERS OF DIFFERENT TYPES OF DEPOSITS. - A MUCH BETTER JOB OF METAL RESOURCES, SURVEYS, AND APPRAISAL DONE BY PROVINCIAL DEPT. OF MINES, DIAND. - NO DETAILED MAPPING ON 1:50,000 SCALE DONE BY GSC IN WESTERN CORDILLERA, EXCEPT AS THESIS TOPICS.
- 1096 (F) - 1 NOT APPLICABLE
COMMENT: 1:250,000 MAPS: NOT RELIABLE ENOUGH - NOT ENOUGH CAREFUL MAPPING IN SOME INSTANCES - WOULD LIKE TO SEE AN INCREASED AMOUNT OF DETAILED (1:50,000) MAPPING IN AREAS OF ECONOMIC INTEREST AND COMPLEX GEOLOGY.
(E) COLUMN A. THERE COULD BE MORE TIME SPENT EVALUATING MINERAL OCCURRENCES IN MEMOIRS, BULLETINS, AND PAPERS. COLUMN B. AGAIN IT TAKES TOO MANY YEARS FOR THE DATA TO GET PUBLISHED.
COLUMN D. THE DATA IS ALWAYS USEFUL, EVEN 60 YEARS LATER
- 1103 1:250,000 GEOLOGIC MAPPING IN THE CORDILLERA REMAINS INCOMPLETE AND 1:50,000 MAPPING ALMOST NON-EXISTENT. COMPLETION OF RECONNAISSANCE MAPPING IS OF FUNDAMENTAL IMPORTANCE TO US AND DETAILED MAPPING IN AREAS OF ECONOMIC INTEREST WOULD BE MOST USEFUL. PUBLICATION DELAYS ARE A SERIOUS PROBLEM. MISSING DISCIPLINES ARE THOSE IN WHICH WE HAVE LITTLE REGULAR INVOLVEMENT.
- 1104 METALLOGENIC STUDIES AND ECONOMIC GEOLOGY GENERALLY COULD BE KEYED INTO 1:50,000 SCALE AND 1:250,000 SCALE MAPPING MORE EFFECTIVELY AND WITH MORE EXPEDIENCE.
- 1105 GSC 1"-4MI. GEOLOGIC MAPS ARE THE CORNERSTONE OF OUR LIBRARY AND GEOLOGICAL DATA BASE. THEY ARE USEFUL FOR MANY DECADES, BUT SHOULD BE UPGRADED WHENEVER POSSIBLE. NOTE THAT 1"-4MI MAPPING IN BC AND YUKON IS ONLY NOW BEING COMPLETED. THE 1:1,000,000 COMPILATION IS GREAT IDEA BUT SUFFERS FROM INERTIA (ONLY NOW RECEIVING COLOURED MAPS). DETAILED GEOLOGICAL STUDIES PERHAPS CONFLICT WITH PROV. GOV'T DESIRES BUT GSC WOULD ENSURE WIDER DISTRIBUTION. GSC TO BE COMPLIMENTED FOR ACCURACY

OF FIELD MAPPING, HARD WORK OF THEIR STAFF, ETC., BUT DELAYS IN PUBLISHING ARE TERRIBLE|| (ALSO PROV. GOV'T).

- 1106 IN OUR EXPERIENCE MOST MEMBERS OF INDUSTRY APPRECIATE THE NECESSITY OF METALLOGENIC STUDIES BUT APPEAR UNWILLING IN SOME CASES TO OPEN DOORS TO MEMBERS OF THE SURVEY WITH RELEASE OF THEIR OWN DATA AS REQUIRED. ONE METHOD OF COMBATING THIS PROBLEM WOULD BE TO ENSURE THAT THE COMPANY WHOSE MINING PROPERTY IS BEING INVESTIGATED IS GUARANTEED THAT THEY WILL HAVE THE OPPORTUNITY TO READ AND APPROVE ANY SUBSEQUENT RELEASE OF DATA MADE BY G.S.C.
- 1115 VERY DIFFICULT TO QUANTIFY USEFULNESS OF BOTH SURVEYS AND TECHNOLOGY TOGETHER MY COMMENTS ON GEOPHYSICS AND GEOCHEMISTRY APPLY TO SURVEYS ONLY, TECHNOLOGY BECOMES OUTDATED MUCH MORE QUICKLY THAN THE ACTUAL SURVEYS.
- 1117 SECTIONS D1 AND D2 ARE AWKWARD, AND IT COULD BE SUGGESTED THAT LOW SCORES REFLECT A WANT FOR INFORMATION IN AREAS OF OUR PARTICULAR INTEREST. CONVERSELY, HIGH SCORES ARE ASSIGNED TO AREAS WE ARE NOT INTERESTED IN, AND HENCE ARE ADEQUATELY CATERED TOO.
- 1130 COMMENT: G.S.C. COAL PUBLICATIONS FOR B.C. AND YUKON NEED UPDATING. GEOLOGY MAPS AT 1:50,000 SCALE FOR THE SAME AREA ARE FEW. SUCH MAPS WOULD BE USEFUL FOR HEAVILY MINERALIZED AREAS. THE NEW SERIES OF REGIONAL 1:1,000,000 MAPS ARE QUITE USEFUL BUT ONLY PARTIAL COVERAGE IS PRESENTLY AVAILABLE. SIMILARLY, AEROMAGNETIC AND GEOCHEMICAL COVERAGE IS ONLY PARTIALLY COMPLETE.

SECTION D6

- 1046 COMMENT RE COMPUTER TAPES: GEOSCAN BY REQUEST.

SECTION D

- 1002 SOME MATERIALS GO OP TO SOON; REPRINTING OFTEN REQUESTED MATERIALS WOULD BE DESIRABLE.
- 1004 COMMENT: MUCH OF OUR DATA USAGE IS FOR THE FAR NORTHERN PARTS OF CANADA. DATA HERE IS GENERALLY LIMITED AND NOT PARTICULARLY UP-TO-DATE.
- 1009 COMMENT: REGIONAL SURFICIAL GEOLOGY MAPPING IS TOTALLY

INADEQUATE. THIS VERY IMPORTANT PHASE OF MAPPING DOES NOT RECEIVE THE DOLLARS EXPENDITURE IT WARRANTS. EACH BEDROCK MAP SHOULD BE ACCOMPANIED BY A SURFICIAL GEOLOGY OVERLAY. DETAILS ON COVER OF RECENT SEDIMENTS ARE OF PRIME IMPORTANCE IN MINERALS EXPLORATION - YET IT IS THE POOR ORPHAN WHEN IT COMES TO DOLLARS FOR MAPPING. THIS ASPECT IS VERY POORLY SERVED BY THE GSC.

- 1014 COMMENTS: THE RADIOMETRIC DATING OF SAMPLES TAKEN ON SURVEYS SEEMS TO BE DELAYED TO A POINT WHERE THEY CANNOT BE USED IN THE REPORTS. AT LEAST THE PRELIMINARY ONES. BY THE TIME THEY ARE OUT AND PUBLISHED, THE USE BY AN EXPLORATION COMPANY IS PROBABLY TOO LATE TO AFFECT DECISIONS.
- 1019 THERE IS AN INORDINATE DELAY IN THE PUBLICATION OF MEMOIRS, PAPERS AND MAPS. EVEN OPEN FILE MAPS ARE HELD BACK - FOR EXAMPLE 6 OR MORE YEARS TAKEN TO RELEASE OPEN FILE 634 - KANANASKIS. THE BABINE SHEET IS STILL NOT AVAILABLE AS COLOURED MAP AND IT WAS MAPPED ABOUT 10 YEARS AGO. THE REGIONAL 1:1,000,000 SYNTHESIS ARE EXCELLENT. IT IS OBVIOUS THAT MUCH UNPUBLISHED DATA ARE RECORDED ON THEM.
- 1020 COMMENT: AS IN THE CASE OF MOST GOVERNMENT PUBLICATIONS, G.S.C. PUBLICATION (INCEPTION TO PUBLICATION) NOTE, IS POOR. BECAUSE MOST OF GSC MAPPING IS IN FRONTIER AREAS, GSC MAPS NOT AS RELEVANT TO US AS ARE PROVINCIAL MAPS.
- 1021 TIMELINESS - ALL COMMENTS ON GSC WORK ARE MITIGATED BY LACK OF TIMELINESS. EXAMPLE - ANNUAL CURRENT RESEARCH IS IN GENERAL TOO BRIEF A SUMMARY TO BE OF MUCH USE ALTHOUGH IT DOES GIVE HIGHLIGHTS THAT ARE SOMETIMES OF USE BUT IT IS NOT TIMELY EITHER.
- 1026 COMMENT: I DO NOT FEEL QUALIFIED TO COMMENT ON DISCIPLINES IN WHICH ACTIVITY IS LOW.
 - RESOURCES SURVEYS, OF COURSE, BECAME OUTDATED IN THE SHORT TO NEAR TERM.
 - REGARDING RECONNAISSANCE MAPPING, I HAVE INDICATED A SHORT TERM OF VALUE. ACTUALLY, THIS DEPENDS ON REPLACEMENT BY MORE DETAILED OR FORMAL DATA. OFTEN IN RECONNAISSANCE SHEETS THE AUTHOR WILL BE FOUND MORE EXPLICIT THAN IN MORE DETAILED - OR FORMAL - COVERAGE, AND THIS CAN BE MOST VALUABLE. I STILL USE RECONNAISSANCE SHEETS OF THE G.S.C. THAT WERE PUBLISHED WELL OVER 20 YEARS AGO.
 - IN GENERAL, THE QUALITY OF ALL G.S.C. WORK IS VERY GOOD.
- 1061 REPRINTING OF OLDER PUBLICATIONS AND MAPS WOULD BE VERY ACCEPTABLE ESPECIALLY IF UPDATED. IF UNABLE TO UPDATE THEN JUST RE-ISSUE OF MAP.

- 1098 COMMENT: MINERAL RESOURCE APPRAISALS HAVE TO BE ON A WORLD WIDE BASIS AND THIS COUPLED WITH CHANGES IN TECHNOLOGY AND ECONOMIC CONDITIONS MEAN THAT A STUDY MAY BE OBSOLETE WHEN PUBLISHED OR IT HAS A GOOD CHANCE OF BEING SO WITHIN A FEW YEARS.
- 1116 COMMENTS: AS WE ARE NOT ON THE CIRCULATION OF THE GSC LITERATURE IT IS IMPOSSIBLE TO ANSWER THIS SECTION.
- 1120 THE GSC IS FIRST CLASS IN COMPARISON TO SIMILAR ORGANIZATIONS (WORLDWIDE) AND TO ACADEMIC INSTITUTIONS. THE URANIUM GROUP IS SUPERB, WITH A FEW MINOR EXCEPTIONS.
- 1123 REGIONS - THE GSC IS THE ONLY REGIONAL SOURCE OF INFORMATION (E.G. CORDILLERA BY COMMON SENSE AGREEMENT BETWEEN GSC-BCDM-E) THUS IF A SHEET WAS MAPPED IN 1930 THAT'S STILL THE BASIC DATA|| THE RATE AT WHICH FINAL HARDCOVER WORDS, FINAL COLOURED MAPS ARE PRODUCED IS AGONIZINGLY SLOW AND IS AN APPALLING REFLECTION ON SOMEONE BETWEEN THE FIELD STAFF AND THE TAXPAYING USERS. THE OPEN FILE IS NO SUBSTITUTE FOR AN INTEGRATED REPORT AND FURTHER COMMENT WILL BE MADE ON THIS POINT.
 (D2A) - HAVE NO KNOWLEDGE OF THIS FIELD, IS THIS TERRAIN SCIENCE, HAVE THEY EVER ATTEMPTED TO TELL GEOLOGISTS AS A WHOLE WHAT THEY ARE DOING? AND WHY?
 (D2B) - ON THE WHOLE THE GEOPHYSICAL DATA HAS BEEN WELL PRESENTED; HOWEVER, THE OPEN FILE FORMAT HAS EVENTUALLY COME TO DOMINATE EVEN THIS FIELD - OFTEN QUITE UNACCEPTABLY AND TOTALLY UNNECESSARY. HENCE ONE IS PRESENTED DATA WITHOUT ANY KNOWLEDGE OF SYSTEM USE, QUALITY, ABILITY TO REPEAT, PRECISION, ETC. THIS IS TRUE OF RADIOMETRIC/ SPECTROMETER SURVEYS, OR GRADIOMETER SURVEYS - A BARE MAP OF NUMBERS - THIS IS SIMPLY BAD SCIENCE, UNNECESSARY AND NO CONTRACTOR WOULD BE ALLOWED TO GET AWAY WITH IT. ALL THE ORIGINAL DOMINION GRAVITY SURVEYS HAD ALL THIS NECESSARY BACK-UP DATA. THE POLICY E.G. IN OPEN FILE #713 OF PUBLISHING A NATIONAL SURVEY WHICH IS PART OF AN INTERNATIONAL PROJECT ON SOFT WHITE PRINT, WITH NO COLOUR AND IMPOSSIBLE TO FIND LAKES IS SIMPLY NOT ACCEPTABLE. IT WOULD OR SHOULD TAKE ONLY WEEKS MORE TO PRODUCE A SET OF MAPS LIKE THE PREDECESSOR MAP 401053G WITH HARD FACE PAPER, CLEARLY MARKED LAKES, COLOUR CODED CONTOURS. SPEED IS NOT THE ONLY CRITERIA IN PUBLISHING; THE CONSUMER MUST BE BORNE IN MIND, OPEN FILE #713 IS VIRTUALLY GARBAGE, AND WHAT WERE THE SPECIFICATIONS OF THE SURVEY? YOU CANNOT TELL FROM THE MAPS. GEOCHEMISTRY SUFFERS FROM THE SAME FAULTS - WE HAVE A SET OF MAPS, NUMBERS AND TAPES, DETACHED FROM THE ORIENTATION SURVEY, AND COMPLETELY REMOVED IN TIME FROM THE FOLLOW-UP AND INTERPRETATION - WHICH IS THEN NOT EVEN PUBLISHED IN A GSC VOLUME. THE USER HAS ALL SORTS OF PROBLEMS WITH THIS TYPE OF RELEASE, AND THE ANSWER "ITS BETTER THAN NOTHING" BEGS THE QUESTION OF WHETHER

THE ENTIRE PROJECT WAS THOUGHT OUT FROM CONCEPTION TO THE EVENTUAL RELEASE - IT'S SELF EVIDENT THAT IT WAS NOT; AND THE CASUAL USER HAS NO IDEA THAT THE FORMAT HAS CHANGED OVER THE YEARS, ETC., ETC. METALLOGENY - ONE ASKS HAVE THERE EVER BEEN ANY STUDIES? THIS IS NOT FACETIOUS, BECAUSE AS THERE IS NO WELL DEFINED FORMAT FOR THESE STUDIES ONE CANNOT SEE A COHERENT PATTERN OF STUDY, EVOLVING WITH TIME, THAT THE GSC IS FOLLOWING. AT ONE TIME THERE WERE "COMMODITY GEOLOGISTS", IN 1980 THIS IS NO LONGER OBVIOUS, AND IF THERE ARE, WHAT IS THEIR ROLE?, HOW WILL THEY COMMUNICATE THEIR STUDIES?, IS THERE A FORMAT?; THERE ARE "REGIONAL METALLOGENIC GEOLOGISTS", HOW DO THESE RELATE TO "COMMODITY GEOLOGISTS"?; WHAT IS THE GOAL OF THE REGIONAL METALLOGENIC GEOLOGIST? HOW DOES HE ATTEMPT TO REACH IT? WHAT WILL THE TAXPAYER HAVE LEARNED FROM HIS EFFORTS? WHO, WHAT AND WHY CONTROLS HIS EFFORTS?

(D2E) - METALLIC MINERAL APPRAISALS, ETC.

GSC SHOULD CONSIDER SERIOUSLY IT'S ROLE - IT'S UP TO EMR DATA DIVISIONS TO DO THIS, IF THE LAW NEEDS IT ETC., THIS IS NOT A FIELD OF SCIENTIFIC ENQUIRY BUT A REGULATORY ROLE OF KEEPING STATISTICS, IT'S NOT THE GSC'S ROLE TO PREDICT.

1126

COMMENTS: THERE IS VERY LITTLE AVAILABLE ON RECENT YUKON DISCOVERIES. THE LACK OF DATA MAY HAVE TO DO WITH THE FACT THAT DIAND TOOK OVER REGIONAL GEOLOGICAL OFFICE AND HAS DONE VERY LITTLE. THE YUKON SUFFERED REGRESS WHEN LOCAL GSC GEOLOGISTS OFFICE WAS TURNED OVER TO DIAND. THERE ARE A NUMBER OF 1:250,000 SHEETS WHICH REQUIRE UPDATING. LITTLE DETAILED WORK AROUND KNOWN MINERAL BELTS.

SECTION E: FORMAT OF PUBLICATIONS.

SECTION E1

- 1005 1:1000,000 COMPILATIONS ARE TOO FULL OF DATA TO BE READILY USEABLE IN FIELD PLANNING.
- 1014 COMMENTS: GEOCHEMISTRY - COULD BE PRESENTED IN A LESS ELABORATE FORM IF THIS WOULD SPEED ITS RELEASE.
- 1021 (B) IMPROVE PRESENTATION
- 1024 (A) COMMENT: THE GSC HAS A TENDENCY TO REGARD ITS WORK AS THE "FINAL" WORD ON A SUBJECT IN QUESTION, RATHER THAN A CHAPTER IN AN ONGOING SAGA. THERE IS ALSO A BIAS IN NOT RECOGNIZING THE WORK OF OTHERS IN ANY AREA - (I.E. MEMOIRS) EXCEPT FOR GSC PERSONNEL|
(B) COMMENT: POSSIBLY MORE EMPHASIS SHOULD BE PLACED IN ECONOMIC GEOLOGY SECTIONS OF VARIOUS REPORTS/MAPS RATHER THAN EMPHASIS ON OTHER ASPECTS OF MAPPING, ETC.
- 1028 (A) COMMENT: NUMBER OF THE ECONOMIC GEOLOGY SERIES PUBLICATIONS DO NOT ADEQUATELY COVER ALL MINERAL OCCURRENCES OF ECONOMIC SIGNIFICANCE.
(B) COMMENT: THE FORMAT OF MOST MAPS PUBLISHED BY G.S.C. IS VERY GOOD.
- 1042 (A) COMMENT: SPEED OF PUBLICATION IS OF GREATER IMPORTANCE THAN STYLE. HOWEVER, CONSIDERING THE CAPACITY OF MODERN WORD-PROCESSING AND PRINTING SYSTEMS THERE WOULD SEEM LITTLE NEED TO REDUCE READABILITY TO ACHIEVE A FASTER DATE TO PUBLICATION. CARE SHOULD BE TAKEN TO AVOID PUBLISHING SUMMARIES AS 'PAPERS' AND THEREBY FAILING TO EVENTUALLY COMPLETE A FINAL PUBLICATION OF THE BASIC DATA.
(B) COMMENT: MAPS CAN HARDLY EVER BE TOO ELABORATE AND USUALLY EMPHASIZE THE MAPPER'S BIAS TOWARDS ONE ASPECT SUCH AS STRUCTURE, PETROLOGY, ETC. IN MANY AREAS MAPPING AT MORE DETAILED SCALES CAN BE JUSTIFIED, PARTICULARLY SO AS TO DOCUMENT ALL THE VARIOUS FEATURES INHERENT IN ROCK DESCRIPTIONS AND THEIR SPATIAL RELATIONSHIPS..
- 1043 COMMENT: COULD USE HIGH QUALITY CARTOGRAPHY AND MORE UP-TO- DATE BASE MAPS.
- 1046 COMMENT: CURRENT RESEARCH ESPECIALLY HELPFUL.
- 1047 (A) COMMENT: CERTAINLY NOTHING IS TOO ELABORATE. "CURRENT RESEARCH" IS PERHAPS MOST USEFUL TO US, IN ITS PRESENT FORM.
- 1061 (A) COMMENT: THESE PUBLICATIONS ARE GOOD ON THE AVERAGE. I HAVE NOT FOUND ANY "TOO ELABORATE", ALTHOUGH PERHAPS

MORE PRELIMINARY TYPE (UNCOLOURED) MAPS COULD BE PUBLISHED AND BE IN USE WHILE WAITING FOR THE COLOURED AND TYPESET VERSIONS WHICH ARE "IN PRESS".

- 1070 (B) COMMENT: TOO MUCH EMPHASIS IS BEING PLACED ON REGIONAL GEOCHEMICAL WORK. LOCAL STUDIES ON ROCK GEOCHEMISTRY AND ORIENTATION SURVEYS AROUND KNOWN DEPOSITS SHOULD BE EMPHASIZED.
- 1078 (A) COMMENT: ECONOMIC GEOLOGY SERIES ARE FEW AND FAR BETWEEN.
(B) COMMENT: THERE SEEMS TO BE VERY LITTLE DETAILED (1:50,000) MAPPING IN AREAS OF MAJOR ORE DEPOSITS IN B.C., 1:250,000 MAPS ARE USUALLY NOT TOO ACCURATE.
- 1087 (B) COMMENT: RE: #11 TOO MUCH TIME IS SPENT MAKING COLORED COMPILATIONS THAT ARE OUT OF DATE WHEN PUBLISHED - WOULD PREFER BLACK AND WHITE OPENFILED VERSION WHICH IS UP-DATED MORE OFTEN - ALSO SUMMARIES OF MAPPING IN CURRENT RESEARCH SHOULD BE PUBLISHED AT 1:1,000,000 OR 1 500,000 RATHER THAN JUST CLOSE SO THAT USERS COULD EASILY UP-DATE THEIR OWN COMPILATIONS - THIS IS A MORE IMPORTANT CONSIDERATION THAN JUST GETTING A MAP TO FIT ON A 8 1/2X11 PAGE.
- 1088 (B) COMMENT: SURFICIENT GEOLOGY NOT GENERALLY USED. IBID RADIOMETRIC AND OFFSHORE.
- 1089 (B) COMMENT: 1:250,000 BEDROCK GEOLOGY UPDATES USUALLY IMPROVE SIGNIFICANTLY ON OLDER EDITIONS. EXPANSION OF 1:250,000 WOULD BE MORE USEFUL THAN EXPANSION OF 1:50,000.
- 1090 (A) COMMENT: CURRENT RESEARCH COULD OFTEN USE MORE DETAIL. (B) COMMENT: OPEN FILE MAPS SHOULD BE MORE RIGOROUSLY PROOFED TO CATCH MINOR ERRORS AND OMISSIONS IN IDENTIFYING UNITS.
- 1096 (A) PAPERS - CURRENT RESEARCH - SOFT COVER. COMMENT: MEMOIRS AND BULLETINS COULD BE LESS FORMAL IN FORMAT FOR BETTER TIMELINESS. LESS TIME SHOULD BE TAKEN IN THEIR PREPARATION. WHY DO BULLETINS AND MEMOIRS SO OFTEN CONTAIN ONLY A FEW SENTENCES ON THE ECONOMIC GEOLOGY OR MINERAL POTENTIAL?
(B) AIRBORNE RADIOMETRIC - NOT APPLICABLE.
OFFSHORE MULTI-PARAMETER - NOT APPLICABLE.
COMMENT: MORE MAPS SHOULD BE ISSUED PROVISIONALLY (UNCOLOURED) TO SPEED UP PUBLICATION. WHY DID YOU PUBLISH AEROMAG AT 1" = 1 MILE INSTEAD OF 1:50,000 FOR SO LONG?
- 1105 (A) GSC MEMOIRS ARE STANDARDS OF EXCELLENCE | DO NOT TAMPER|
(B) THUS FAR I HAVE NOT SEEN ANY USE MADE OF REGIONAL

GEOCHEM. DATA BY GSC - PERHAPS ADVISEDLY BUT CERTAINLY AN AREA WHERE MUCH FUTURE WORK COULD BE DONE.

- 1107 IT IS STILL SURPRISING THAT METALLIC DEPOSITS ARE NOT CONSIDERED AS PART OF THE GEOLOGY IN SOME MEMOIRS AND BULLETINS.
- 1111 (B) ANY MAP SHEET SHOULD BE ACCOMPANIED BY SOME SORT OF MEMOIR. 'MARGINAL NOTES' - WHICH ARE THE ONLY SOURCE OF INFORMATION ON SOME OLD SHEETS COVERING OUR AREA LEAVE MUCH TO BE DESIRED.
- 1116 (A) - UNKNOWN.
- 1120 (A) SHOULD ADD LOCATION MAPS TO BULLETINS AND PAPERS.
(B) REGIONAL CORRELATIONS SHOULD BE DONE ON MAGNETICS

SECTION E4

- 1002 COMMENT RE MICROFICHE: IF DATA ON FICHE IS USEFUL IN ANY CAPACITY, USER INEVITABLE WANTS HARD COPY. COMMENT RE COMPUTER TAPES: NOT AWARE WHAT IS AVAILABLE; COST ETC.
- 1009 COMMENT RE MICROFICHE: PROVIDED YOU DO NOT ATTEMPT TO ELIMINATE PLOTTING OF DATA ON MAPS BY MICROFICHE TABLES.
- 1019 MICROFICHE IS USELESS FOR OFFICES IN REMOTE AREAS.
- 1020 COMMENT RE MICROFICHE: WE ORDER MICROFICHE ONLY FOR DATA THAT WILL NOT BE WORKED ON IMMEDIATELY.
- 1022 COMMENT RE MICROFICHE - PROVIDED HARD COPY IS AVAILABLE ON REQUEST FOR COST OF REPRODUCTION.
- 1024 COMMENT RE MICROFICHE: COMPANY MICROFICHE IS NEW. ITS USE WILL STEADILY EXPAND.
- 1026 COMMENT RE MICROFICHE: WHILE DESIRABLE FROM A STORAGE VIEW, PARTICULARLY FOR SUPPORT OF FIELD DATA, I FIND IT INCONVENIENT FOR REFERENCE. A REPORT OR MAP SHOULD BE PUBLISHED.
- 1028 COMMENT RE MICROFICHE: MICROFICHE IS FINE FOR MOST DATA PRESENTATION EXCEPT FOR MAPS.
- 1032 COMMENT RE MICROFICHE: SAVES STORAGE PROBLEMS
- 1033 COMMENT RE MICROFICHE: FOR GEOCHEM DATA-ROCK ANALYSES AND OTHER SUPPORTING DATA MICROFICHE HAS ADVANTAGES - AS LONG AS HARD COPIES OF REPORTS, MAPS, PERHAPS A SUMMARY

OF TABULAR DATA, ARE ALWAYS AVAILABLE.

1035 SHOULD BE USED MORE.

1042 COMMENT RE MICROFICHE: STANDARDIZATION IS NECESSARY, ALONG WITH EQUAL EDITORIAL CONTROL AS FOR 'CLASSICAL' PRINTED PUBLICATION. IMPORTANT TO ENSURE LEGABILITY.

1047 COMMENT RE MICROFICHE: GOOD ROUTE TO GO.

1050 COMMENT RE MICROFICHE: THE MOST FAVOURABLE COMMENT I RECEIVED WAS "A NECESSARY EVIL". I CONSIDER THAT MICROFICHE IS COUNTER PRODUCTIVE - DATA ONLY AVAILABLE IN THAT FORMS REFERRED TO SO INFREQUENTLY AS TO BE OF LITTLE VALUE.

1055 COMMENT RE MICROFICHE: THE MAIN BODY OF A REPORT OR TEXT SHOULD BE PRINTED.

1062 COMMENT RE MICROFICHE: READILY FILEABLE AND RETRIEVABLE.

1078 COMMENT RE MICROFICHE: WE PLAN TO USE MORE AND WOULD LIKE TO SEE ALL MAPS EVENTUALLY MADE AVAILABLE ON MICROFILM.

1082 COMMENT RE MICROFICHE: USING THE PROVINCIAL ASSESSMENT FILES ONE SEES THE ADVANTAGE OF FILING AND HANDLING LARGE QUANTITIES OF DATA.

1087 COMMENT RE MICROFICHE: APPROVE AT USE OF MICROFICHE FOR SUPPORTING DATA - WE ARE ACQUIRING A UNIT SOON.

1088 COMMENT RE MICROFICHE: MAPS IN PARTICULAR REQUIRED AS BASE FOR PLOTTING OTHER DATA.

1089 COMMENT RE MICROFICHE: PORTABILITY IS AN IMPORTANT ASPECT OF GSC DATA. MICROFICHE IS NOT REALLY PORTABLE. REPRODUCTION OF MICROFICHE IS USUALLY OF INACCEPTABLE QUALITY.

1090 COMMENT RE MICROFICHE: ACCEPTABLE FOR SOME TABULAR MATERIAL BUT SUCH DOCUMENTS AS REGIONAL GEOCHEMICAL STUDIES SHOULD BE AVAILABLE IN PRINTED FORM FOR FIELD USE.

1093 COMMENT RE MICROFICHE - POOR REPRODUCTION TO PAPER - ASSESSMENT REPORTS FROM DIAND NOT LEGIBLE.

1095 TOO EXPENSIVE TO ENLARGE AND PRINT FROM NEGATIVE TO POSITIVE.

1096 COMMENT RE MICROFICHE: ONLY IF THE DATA IS VERY REPETITIOUS, E.G. LISTS OF FAUNA/ COLLECTIONS/ SPECIMEN LOCATIONS, RADIOMETRIC DATES, ETC.

- 1098 COMMENT RE MICROFICHE: WHILE WE DO NOT USE THE MICROFICHE READER MUCH I FEEL ITS USE WILL INCREASE STRONGLY WITHIN THE NEXT FEW YEARS.
- 1100 WE WOULD ACQUIRE READING FACILITY IF DATA AVAILABLE ON MICROFICHE.
- 1106 REPRODUCIBILITY OF DATA IS FOUND TO BE POOR.
- 1107 MICROFICHE CAN BE READ AT COMMERCIALY AVAILABLE ORGANIZATIONS OR LIBRARIES. THE USE OF MICROFICHE FOR LARGE QUANTITIES OF SUPPORTING DATA MAY REDUCE COST AND PERHAPS SPEED UP PUBLICATION TIME.
- 1111 USE OF MICROFICHE IS INCREASING RAPIDLY WITH RECENT ACQUISITION OF A READER.
- 1130 COMMENT RE MICROFICHE: SUITABLE FOR INDICES AND TABLES, BUT NOT SUITABLE FOR MAPS AND GENERAL LITERATURE.

SECTION E5

- 1116 (1) AND (2) - DON'T KNOW.

SECTION E6

- 1009 WHAT IS GEOSCAN?
- 1026 COMMENT: SUCH DATA COULD BE USED CERTAINLY, BUT NOT NORMALLY REQUIRED.
- 1028 COMMENT RE COMPUTER TAPES: E-6 WE HAVE THE COMPUTER FACILITY BUT NO EXISTING SOFTWARE. ACCESS TO INFORMATION PERTAINING TO G.S.C. TAPES IS LACKING. FUTURE POSSIBILITIES OF USING G.S.C. TAPES OF GEOCHEMICAL DATA AND GEOSCAN DATA EXIST.
- 1032 COMMENT RE COMPUTER TAPES: NOT USED
- 1042 COMMENT RE COMPUTER TAPES: THE GEOSCAN DATA BASE IS USED, BUT I AM UNAWARE THAT THE TAPES ARE AVAILABLE, IF INDEED THEY ARE?
- 1043 COMMENT RE COMPUTER TAPES: WOULD PERHAPS USE THROUGH COMMERCIAL FACILITY FOR REINTERPRETATION.

- 1061 COMMENT RE COMPUTER TAPES: NOT USED AT PRESENT AS WE ARE SMALL.
- 1065 COMMENT RE COMPUTER TAPES: THE GSC SHOULD PROVIDE A TERMINAL AT THEIR OFFICES FOR ACCESSING MATERIAL ON THESE TAPES.
- 1082 THE PARENT COMPANY HAS THE FACILITIES TO USE THE TAPES, BUT I AM NOT AWARE OF THEM DOING SO.
- 1090 COMMENT RE COMPUTER TAPES: IDEAL FOR ORGANIZATIONS WITH FACILITIES TO USE THEM.
- 1092 COMMENT RE COMPUTER TAPES: PROBABLY WILL USE IN FUTURE WHEN OUR COMPUTER SYSTEM MORE REFINED.
- 1105 I HAVE PURCHASED ALL GSC GEOCHEM. COMPUTER TAPES AND HAD THEM PLOTTED ON 1:50,000 TOPOG. MAPS FOR INTEGRATION WITH COMPANY GEOCHEMICAL DATA.
- 1111 WOULD HAVE TO BE COMPATIBLE WITH IN HOUSE COMPUTER.
- 1128 COMMENT RE COMPUTER TAPES: THIS STAGE HAS NOT BEEN REACHED BY OUR ORGANIZATION TO-DATE.
- 1130 COMMENT RE COMPUTER TAPES: THESE WOULD BE USEFUL AT REGIONAL CENTRES FOR PUBLIC USE. A TENDENCY TO PRODUCE SUCH TAPES AT THE EXPENSE OF OTHER MORE GENERALLY ACCEPTABLE MEDIA WOULD BE ADVANTAGEOUS TO CENTRALLY ORGANIZED INSTITUTIONS, BUT NOT INDIVIDUALS OR SMALL COMPANIES.
- 1133 COMMENT RE COMPUTER TAPES: WE MAY HAVE THE FACILITIES IN THE FUTURE.

SECTION E

- 1009 COMMENT E1 (B) (1) NOT SUFFICIENT SURFICIAL GEOLOGY DONE. (2) COMPILATION MAPS TO SCALES OF 1:250,000 ARE FINE BUT WHAT HAPPENS TO THE OUTCROP MAPS USED FOR THESE COMPILATIONS? WHY CAN THEY NOT BE MADE AVAILABLE IN OPEN FILE FORM AND TO SCALE OF 1:50,000? THIS IS THE BASIC DATA INDUSTRY WANTS.
- 1019 COMMENT RE COMPUTER TAPES: PLANS ARE BEING MADE TO UTILIZE GSC TAPES.
- 1020 COMMENT: MORE FREQUENT PUBLICATION IN THE ECONOMIC GEOLOGY SERIES WOULD BE USEFUL.

1123

E-1A) - IT'S NOT OBVIOUS TO THE LAYMAN WHY THE GSC NEED "MEMOIRS" AND "BULLETINS" AS WE MOVE TO THE 1980'S, ONE REVAMPED FINAL FORMAT WILL SUFFICE, ESPECIALLY IF IT WILL SPEED UP THE END PRODUCT TO THE CONSUMER, "PAPERS" ARE GOOD, AT LEAST THERE ARE SOME WORDS-ENDLESS OPEN FILE MAPS, ETC., SHOULD HAVE BEEN "PAPERS". CURRENT RESEARCH IS GETTING OUT OF HAND, AGAIN THESE COULD BE "PAPERS" WITH ONE MORE WEEKS EFFORT. I AM NO LONGER SURE WHAT THE ECONOMIC GEOLOGY SERIES IS - EVEN THOUGH IT'S MY MAIN CONCERN| THE ONCE A DECADE 600 PAGE - TO ME IS WONDERFUL, BUT NOT IF IT DIVERTS ENORMOUS EFFORT. E-1B) - BEDROCK MAPS - CONTENT GOOD, BUT WHEN, OH WHEN, IN COLOUR WITH COMPREHENSIVE LEGEND AND NOTES??? BLACK AND WHITE ARE POOR - E.G. THE QUIET LAKE, YUKON SHEET - WHO CAN POSSIBLY UNDERSTAND THIS. ARE THERE ANY 1:50,000 SHEETS?? - COLOURED? THE COMPILATIONS WILL BE A TREMENDOUS (BOON - BUT AFTER 7 YEARS ONLY ONE COLOURED ONE OUT - AND THIS WITH THE TECHNOLOGY OF THE '70'S IS APPALLING. THE SURFICIAL GEOLOGY ARE MAINLY HOPELESS - UNREADABLE BLACK AND WHITE - NO CROSS-SECTIONS, AND NO SCHEMATIC RECONSTRUCTIONS OF DEGLACIAL HISTORY.

(E-2) - ALL THE AIRBORNE MAPS COULD BE IMPROVED - HARD-FACE PAPER - COLOURED CONTOURS AND LACK VITAL DATA TO HELP INTERPRET. GEOCHEM MAPS - HAVE SENT FREQUENT SUBMITTALS TO GSC ABOUT THESE AND HAVE GAINED SOME IMPROVEMENT. SPEED OF OUTPUT SEEMS TO BE THE ONLY CRITERIA BUT IT SHOULD NOT BE.

(E-4) - AS LONG AS YOU DON'T ATTEMPT TO REPLACE PLOTTING OF DATA ON MAPS BY MICROFICHED TABLES.

(E-6) - WHAT IS GEOSCAN???(|) - OR IS THIS LATEST NAME FOR ERTS/LANDSET IN WHICH CASE IT IS USED 1.0% OF THE TIME. PURCHASE GEOCHEM TAPES WHICH ARE WELL ORGANIZED TO TURN DATA INTO A "USER USEFUL" FORMAT||

SECTION F: ACCESS.

SECTION F1

- 1000 COMMENT: 1. COMPANY LIBRARY
2. UNIVERSITY OF TORONTO LIBRARY
3. OGS LIBRARY
- 1032 COMMENT: PURCHASE FOR COMPANY LIBRARY OR CONSULTED AT UNIVERSITY LIBRARY.
- 1042 COMMENT: I WOULD APPRECIATE A CENTRALIZED - AND READILY ACCESSABLE- CENTRAL DEPOSITORY IN THE MAJOR BUSINESS CENTRES (TORONTO, CALGARY, VANCOUVER) OF ALL GSC PUBLICATIONS, OPEN- FILES, ETC., WITH DEPOSITORIES OF RELEVANT DOCUMENTS IN MANY MORE REGIONAL CENTRES.
- 1047 COMMENT: ABOUT 99% OF OUR USES IS FROM COMPANY LIBRARY.
- 1061 NOT USED AS THE GSC LIBRARY IS IN TOWN AS WELL AS (CALGARY).
- 1069 COMMENT: GENERALLY, ALL GSC DOCUMENTS ARE READILY ACCESSIBLE.
- 1076 COMMENT: MOST COMMONLY WE USE OUR COMPANY LIBRARY BUT THE GOVERNMENT LIBRARY IS INVALUABLE FOR REFERENCES WE DON'T HAVE.
- 1077 OR GSC LIBRARY ITSELF.
- 1082 COMMENT: LIBRARY AT THE B.C. CHAMBER OF MINES IS ALSO VERY USEFUL.
- 1090 COMMENT: THE VANCOUVER G.S.C. LIBRARY IS EXCELLENT.
- 1096 COMMENT: THE GSC LIBRARY IN VANCOUVER IS ESPECIALLY USEFUL AND HELPFUL, ALLOWING LOANS OF MATERIAL TO INDUSTRY.
- 1105 I PURCHASE ALL NEW GSC DATA FOR COMPANY LIBRARY OF MATERIAL LIKELY TO BE OF USE IN OUR EXPLORATION WORK.
- 1130 COMMENT: IT WOULD BE ADVANTAGEOUS TO MANY COMPANIES AND INDIVIDUALS IF THE GSC AND PROVINCIAL MINE DEPARTMENTS COULD SET-UP GEOLOGICAL LIBRARIES AT ADDITIONAL LOCATIONS. IN WESTERN CANADA, GEOLOGICAL LIBRARIES ARE TOO CENTRALIZED (IN VANCOUVER, VICTORIA, AND WHITEHORSE).
- 1131 INDIVIDUAL LIBRARY - CANCEL

SECTION F3

- 1002 GEOREF MOST USEFUL AS SUBJECT INDEXING IS VERY DESIRABLE AND FAST; NTS ALSO.
- 1009 WHAT ARE GEOSCAN, GEOREF?
- 1019 COMMENT: BY INFORMATION OF GSC OFFICES, IT IS ASSUMED THAT DIALOGUE WITH GSC OFFICES IS INCLUDED.
- 1024 COMMENT: SLOW DELIVERY OF PURCHASE ORDERS.
- 1028 COMMENT: MORE FREQUENT PUBLICATION OF G.S.C. INDEXES IS PREFERRED.
- 1042 COMMENT: ON GEOSCAN PERHAPS THE 'SERVICE' IS TOO NEW TO COMMENT FAIRLY - HOWEVER, THE DATA BASE HAS BEEN IN PREPARATION NOW FOR OVER TEN YEARS, BUT READILY ACCESSABLE AND PROCESSABLE INDEXABLE RECOVERIES ARE STILL NOT AVAILABLE AND ARE LONG OVERDUE.
- 1043 GEOSCAN & GEOREF - WHAT IS IT? COMMENT: MORE DIFFICULT NOW THAT BOOKSTORE IN TORONTO WAS CLOSED - USE TO BE ABLE TO GET REPORTS LOCALLY.
- 1053 COMMENT: DOES GEOREF STILL EXIST?
- 1056 COMMENT: INFORMATION SERVICES AT G.S.C. OFFICERS ARE ONLY AS EFFECTIVE AS THE PERSONNEL MANNING THE SERVICES.
- 1062 COMMENT: GEOSCAN AND GEOREF ARE USED BY OUR LIBRARIAN.
- 1069 COMMENT: GSC MONTHLY INFORMATION CIRCULAR IS MOST EFFECTIVE.
- 1076 ONLY PARTIALLY.
- 1077 MOST INDEXES, UNLESS SOMEHOW FULL OF ERRORS ARE REASONABLY EFFECTIVE; THIS APPLIES UNIVERSALLY NOT JUST TO GSC.
- 1078 COMMENT: INFORMATION SERVICES, MASTER BIBLIOGRAPHIES, REFERENCES SHOULD BE MADE MORE AVAILABLE - POSSIBLY ON MICROFILM. MORE ADVICE OF SERVICES, IF AVAILABLE, SHOULD BE MADE.
- 1082 COMMENT: I SHOULD MAKE MORE USE OF THESE SOURCES THAN I DO.
- 1089 COMMENT: RE - F2: TOO MUCH IS OUT OF PRINT; RE - GSC CUMULATIVE INDEX VOLUMES: THEY ARE POORLY ORGANIZED AND SOMETIMES CONFUSING WITH OVERLAPPING TIME PERIODS.
- 1090 COMMENT: G.S.C. OFFICE INFORMATION NOT ALWAYS CURRENT.

NEED BETTER CROSS REFERENCES.

- 1096 (A) GEOSCAN, GEOREF - WHAT ARE THEY? COMMENT: OFTEN THE DISPLAY CASE (OF RECENT PUBLICATIONS) AT THE GSC OFFICE IS MOST EFFECTIVE.
- 1105 WHAT IS GEOSCAN AND GEOREF?
- 1107 THERE ARE TIMES WHEN I SEE PUBLICATIONS I DO NOT RECALL APPEARING IN THE MONTHLY INFORMATION CIRCULAR - HOWEVER, I'M SURE THIS MUST BE MY OWN OVERSIGHT.
- 1116 WOULD LIKE TO HAVE THE ABOVE GUIDES AND INDEXES.

SECTION F4

- 1043 WOULD LIKE TO.
- 1096 VIEWED IT FOR 1979, 1980. NOTHING OF INTEREST IN IT.

SECTION F

- 1004 COMMENT: GEOSCAN IS EXCELLENT
- 1009 COMMENT: NO PRIVATE ORGANIZATION HAS THE SPACE AVAILABLE TO KEEP ALL GSC PUBLICATIONS. MOST PUBLIC LIBRARIES DO NOT KNOW WHAT GSC STANDS FOR. FORTUNATELY, IN TORONTO, WE HAVE THE ONTARIO GEOLOGICAL SURVEY AND UNIVERSITY OF TORONTO LIBRARIES AVAILABLE. NORMALLY TO GET INFORMATION OR REPORTS WE HAVE TO CONTACT THE GSC FOR SAME. THIS CAN BE TIME CONSUMING.
- 1028 COMMENT: WE HAVE AN EXTENSIVE COLLECTION OF G.S.C. AND PROVINCIAL SURVEY DOCUMENTS AT OUR MAIN EXPLORATION LIBRARY LIBRARY UNITS CONTAINING LIMITED G.S.C. PUBLICATIONS ARE ALSO MAINTAINED AT OUR CORPORATE EXPLORATION OFFICE, THE EXPLORATION RESEARCH LAB, AND OUR DISTRICT OFFICES ACROSS CANADA.
- 1123 (F-1) - ALMOST NO INDIVIDUAL WOULD HAVE S'S/SPACE TO KEEP COMPREHENSIVE GSC LIBRARY; MOST PUBLIC LIBRARIES DO NOT KNOW WHAT THE INITIALS G.S.C. EVEN STAND FOR; IN TORONTO, WITHOUT O.G.S. LIBRARY AND THE U OF T LIBRARY THERE WOULD BE NO COMPREHENSIVE ACCESS TO G.S.C. DATA
(F-3) - WHAT ARE GEOSCAN? AND GEOREF? MY FAULT IN NOT KNOWING, BUT THE G.S.C.'S FAULT IN NOT ADEQUATELY

INFORMING ME OF THEIR EXISTANCE AND USE.

1126 NO GSC OFFICE AT WHITEHORSE.

SECTION G: INFORMAL OUTPUT.

SECTION G1

1061 MOSTLY AT CONVENTIONS.

SECTION G2

1043 RARELY SEE THEM

1047 PERSONAL CONTACT IS BEST.

1061 CONVENTIONS, OCCASIONALLY BY PHONE IF THE AUTHOR IS KNOWN PERSONALLY.

1068 BY MAIL - FARCE

1077 DEPENDS ON WHO ANSWERS THE PHONE.

1082 VANCOUVER - AND YES IT IS EFFECTIVE.

SECTION G3

1024 G-3 - YES. IMPORTANT FOR GSC TO BE REPRESENTED FOR INFORMAL DISCUSSIONS.

1042 I AM UNCERTAIN AS TO THE MEANING OF QUESTION G-3. GENERALLY I HAVE FOUND THE ALMOST TOTAL ABSENCE OF GSC PERSONNEL AT MAJOR CONFERENCES AND WORKSHOPS VERY DISHEARTENING. SUCH MEETINGS PROVIDE THE BEST FORUM FOR OPEN DISCUSSION AND REVIEW BY THE GENERAL ACADEMIC AND INDUSTRIAL GEOLOGICAL COMMUNITY OF THE RELEVANCY AND QUALITY OF GSC PROGRAMMES AND SCIENTIFIC RESULTS. WHEN ON THE RARE OCCASSION THAT GSC PERSONNEL ARE PRESENT THEY USUALLY PARTICIPATE AT A LEVEL WELL ABOVE THE AVERAGE, CONSISTENT WITH THEIR INDIVIDUAL STANDINGS WITHIN THE GEOLOGICAL COMMUNITY AND APPROPRIATE TO THE NATIONAL GEOSCIENCE RESEARCH INSTITUTE.

1061 WORKSHOPS - LETS HAVE MORE OF THESE.

1065 GSC SPONSORED SEMINARS ON TOPICAL EXPLORATION TOPICS WOULD BE ADVANTAGEOUS FOR ALL.

1107 GSC PERSONNEL ALWAYS PARTICIPATE VERY WELL WHEN THEY ARE

ALLOWED TO ATTEND. GUIDELINES FOR ATTENDANCE ARE PERHAPS TOO RESTRICTIVE.

SECTIONS G1 TO G3

1117 REFLECTS A LACK OF MOVEMENT ON THE PART OF GSC PERSONNEL, PROBABLY BECAUSE OF BUDGETARY RESTRAINTS.

SECTION G4

- 1021 ABSOLUTELY NOT. DATA IS COLLECTED WITH TAXPAYERS MONEY AND SHOULD BE AVAILABLE TO ALL -SHOULD NOT BE UTILIZED FOR PERSONAL EDIFICATION AND/OR SCIENTIFIC GLORIFICATION.
- 1024 G-4 - VALID METHOD OF EXPRESSION OF IDEAS AND RESULTS OF INVESTIGATIONS. MORE USE SHOULD BE MADE OF THIS FACILITY.
- 1026 COMMENT ON G-1 TO G-4: THERE IS NO PROBLEM IN PUBLISHING OF MOST ACADEMICALLY OR RESEARCH-ORIENTED PAPERS IN OUTSIDE PUBLICATIONS - THESE ARE AVAILABLE IF REQUIRED. DISSEMINATION OF INFORMATION OF MORE CURRENT USE SHOULD BE HANDLED BY THE G.S.C., AS THEY DO.
- 1032 COMMENT ON G-1 TO G-4: G-4 IF SUCH PUBLICATIONS (ARE) SHOULD BE REFERRED IN THE GSC NOTICES OF PUBLICATIONS OR MONTHLY CIRCULARS|
- 1033 COMMENTS: PUBLISHING IN OUTSIDE JOURNALS MEANS, EXTRA TIME INVOLVED TO LOCATE APPROPRIATE JOURNAL AND OBTAIN COPY OF PERTINENT DATA, - SHOULD BE LIMITED TO "RESEARCH" TOPICS AND THOSE TOPICS THAT ARE OF INTEREST TO SPECIALIZED DISCIPLINES.
- 1043 COMMENT: G-4 WISH THEY COULD GET REPORTS OUT THROUGH EM&R AS FAST AS OUTSIDE.
- 1047 COMMENT ON G-1 TO G-4: G-4: OBSERVATIONS SHOULD ALWAYS COME OUT IN SOME SORT OF GSC PUBLICATION AS SOON AS POSSIBLE AFTER THEY ARE COLLECTED. THE ROUTE OF OUTSIDE PUBLICATION SHOULD BE FOR MORE INTERPERTATIVE WORK.
- 1056 COMMENT: IT APPEARS THAT FEDERAL FUNDING SEVERELY LIMITS THE NUMBER OF G.S.C. GEOSCIENTISTS WHO CAN ATTEND CONFERENCES. CONSEQUENTLY, WHAT COULD BE A VERY

EFFECTIVE WAY OF COMMUNICATION BOTH FORMALLY AND INFORMALLY, IS NOT BEING USED TO ITS FULLEST EXTENT.

- 1060 MOST OF US ARE TOO DAMNED BUSY TO READ MORE THAN FOUR OR FIVE JOURNALS AND HENCE WE MISS MANY ARTICLES OF INTEREST.
- 1062 GSC OUTPUT BEST SERVED IN GSC PUBLICATIONS.
- 1077 WE ARE LESS LIKELY TO BECOME AWARE OF OR USE IT IF THE OUTPUT IS IN SOME OBSCURE JOURNAL, ETC.
- 1089 COMMENT ON G-1 TO G-4: RE: G-4: WE HAVE NO SUBSCRIPTION TO MANY OF THE SCIENTIFIC JOURNALS. OUTPUT IN THE FORM OF GSC PUBLICATIONS IS THEREFORE MORE READILY ACQUIRED AND STORED.
- 1106 THERE ARE SO MANY OUTSIDE PUBLICATIONS THAT WE FEEL UNLESS CERTAIN GSC ITEMS ARE PUBLISHED WITHIN THE GSC RESOURCES SYSTEM, SUCH ITEMS MAY BE OVERLOOKED. WE CERTAINLY AGREE THAT MEMBERS OF THE GSC SHOULD PUBLISH ELSEWHERE, BUT AT THE SAME TIME, MATERIAL SHOULD APPEAR SIMULTANEOUSLY WITHIN THE GSC PUBLICATION.
- 1107 COMMUNICATION THROUGH OUTSIDE PUBLICATION IS NOT ONLY EFFECTIVE - IT IS AN ESSENTIAL METHOD OF ENSURING CROSS-FERTILIZATION BY EXPOSURE TO EXTERNAL REVIEWERS AND PERHAPS A LARGER WORLD-WIDE AUDIENCE.
- 1117 IS ACCEPTABLE WHEN PUBLISHED IN PARALLEL. OTHERWISE IT ASSUMES WIDE SUBSCRIPTIONS AND/OR CIRCULATION TAKES PLACE.
- 1131 G-4 - SHOULD NOT REPLACE GSC REPORTS.

SECTIONS G1 TO G4

- 1014 I MAKE A POINT OF CALLING IN AT THE OTTAWA HEADQUARTERS OF THE SURVEY - ABOUT 4 TIMES A YEAR.
- 1020 COMMENT: GSC STAFF DO NOT ATTEND CONFERENCES, SUFFICIENTLY. IT IS A MAJOR INFORMATION TRADING PLACE.
- 1024 COMMENT ON G-1 TO G-4: G-1 MODERATE - OCCASIONAL
- 1069 I HAVE FOUND THAT GSC PERSONNEL ARE READILY APPROACHABLE AND SINCERELY ACCOMMODATING. IN MY OPINION, THIS SHOULD CONTINUE AND BE ENCOURAGED.
- 1087 COMMENTS: G-4 - IF IT IS AN EASILY ACCESSIBLE JOURNAL,

IF NOT THAN A COPY OF THE PUBLICATIONS AS A PAPER WOULD BE IN ORDER.

- 1095 WE ARE VERY PLEASED IN THE MAIN, WITH THE MAPS, REPORTS AND COMMUNICATION WITH GSC PERSONNEL. THE CALIBRE OF THEIR TECHNICAL WRITING IS EXCELLENT.
- 1098 AT MOST CONFERENCES THE GSC IS FAIRLY WELL REPRESENTED. THERE HAVE BEEN CASES WITHIN THE PAST TWO YEARS WHEN VERY FEW GSC PEOPLE WERE PRESENT AND SOME OF THEM PAID THEIR OWN EXPENSES. I BELIEVE THE 1980 PROSPECTORS WOULD BE ONE EXAMPLE. G4 - QUESTIONABLE.
- 1105 GSC OFFICES IN VANCOUVER AND WHITEHORSE VERY IMPORTANT TO US - FOR PERSONAL COMMUNICATIONS AND PURCHASE OF DATA - CALGARY LESS SO, BUT PROBABLY IMPORTANT TO CALGARY RESIDENTS. OF WESTERN CANADIAN GSC, ONLY 3-4 INDIVIDUALS PARTICIPATE/MINGLE WITH INDUSTRY MORE SUCH PEOPLE NEEDED|
- 1114 DUE TO CUTBACK NOT ENOUGH INPUT AT WORKSHOPS AND CONFERENCES.

SECTION G

- 1009 COMMENT ON G-1 TO G-4: G-3 - NOT SUFFICIENT PARTICIPATION BY GSC PERSONNEL AT CONFERENCES, ETC. THIS SHOULD BE IMPROVED. G-4 - THIS IS EFFECTIVE ONLY DUE TO LONG DELAYS IN PUBLICATION BY GSC. IF TIME FOR PUBLICATION BY GSC CAN BE IMPROVED THEN OUTSIDE PUBLICATIONS SHOULD NOT BE NECESSARY.
- 1019 COMMENT ON G-1 TO G-4: THE CANADIAN JOURNAL OF EARTH SCIENCES IS A GOOD FORUM FOR MORE ESOTERIC ABSTRACT PAPERS.
- 1028 COMMENT ON G-1 TO G-4: GENERALLY OUR COMMUNICATION WITH G.S.C. IS GOOD AND ADEQUATE.
G-1 OUR STAFF COMMUNICATE WITH G.S.C. PERSONNEL MORE FREQUENTLY DURING THE FIELD SEASON.
G-2 COMMUNICATION TENDS TO BE MORE INFREQUENT BY MAIL.
G-3 PARTICIPATION BY G.S.C. PERSONNEL VARIES GREATLY ACROSS THE COUNTRY.
G-4 DOES NOT MATTER AS LONG AS THE INFORMATION IS READ-ILY AVAILABLE.
- 1090 COMMENT ON G-1 TO G-4: OUTSIDE PUBLICATION PROMOTES FEEDBACK AND DISCUSSION.
- 1104 WAIT TOO LONG FOR THE INFORMATION GENERALLY BUT

SPECIFICALLY WITH REFERENCE TO G-4.

1120 REPORT OF ACTIVITIES - MOST NB

1123 (G-3) - WITHIN THE LIMITS OF RESTRICTED TRAVEL BUDGETS - HOWEVER, I FEEL THEY COULD BE MORE ACTIVE IN PARTICIPATING AND THUS WOULD BE GOOD IN ALL DIRECTIONS - FOR THE G.S.C., THEMSELVES, THE AUDIENCE. THE GSC SHOULD THEMSELVES PUT ON MORE WORKSHOPS - WOULD BE THEIR BEST ADVERT, BASINS IN THE PROTEROZOIC; METAMORPHISM; EXPLORATION '77, ETC. WERE WELL ATTENDED AND AN EXCELLENT EFFORT BY THE GSC

(G-4) - YES, IT'S GOOD - BUT WHY DO THEY DO IT??? BECAUSE MEMOIRS/BULLETINS TOO SLOW? BECAUSE NO ONE READS GSC PUBLICATIONS? BECAUSE AN EGO TRIP FOR THE AUTHOR - MORE OF WORK ON THE EAST ARM OF GREAT SLAVE LAKE IS IN OUTSIDE PUBLICATIONS THAN IN GSC; SAME WITH PALAEOMAGNETISM WHY IS THIS;? MOST OF THE GSC VANCOUVER SECTIONS' STRUCTURAL EVOLUTION OF THE CORDILLERA IS AN OUTSIDE PUBLICATIONS - WHY IS IT THAT THE MOST ACTIVE GSC PEOPLE PUBLISH OUTSIDE THE GSC????

1127 COMMUNICATION AT WORKSHOP TENDS NOT TO BE VERY EFFECTIVE BECAUSE OF TIME RESTRAINTS.

SECTION H: CURRENT RESEARCH AND NEW DIRECTIONS.

SECTION H1

- 1014 BARELY
- 1043 GOOD THING SPEEDS UP IMPORTANT POINTS TO THE PUBLIC.

SECTION H2

- 1009 SEE H1 ABOVE.
- 1077 (F) MATERIAL NOT ESPECIALLY RELEVANT (X) 6.
- 1096 (F) NOT AWARE THAT IT WAS INVITED. (X)

SECTION H3

- 1000 THE EXISTENCE OF THIS QUESTIONNAIRE RECOGNIZES THAT A PROBLEM EXISTS WITHIN THE GSC AND ONE HOPES IT WILL GO SOME WAY IN CORRECTING IT.
- 1005 MORE RAPID DISSEMINATION OF DATA IN OPEN FILE REPORTS. ATTEMPT TO ANTICIPATE AREAS WHERE INTEREST WILL BE INCREASING AND INSTITUTE REVISION MAPPING PROGRAMS. THIS MAY ALSO STIMULATE EXPLORATION FOR UNKNOWN OR UNRECOGNIZED DEPOSIT TYPES.
- 1009 COMMENTS: SEE ATTACHED.
- 1) THE G.S.C. APPEARS, TO AN OUTSIDER, TO BE LIKE A SHIP WITHOUT A CAPTAIN OR WITHOUT A PURPOSE. ITS SPIRIT HAS BEEN LOST. IT NEEDS TO HAVE ITS OBJECTIVES DEFINED, GIVEN FORCEFUL LEADERSHIP, AND THE BUDGET TO DO THE JOB.
 - 2) THE G.S.C. SHOULD BE THE MAJOR SCIENTIFIC RESEARCH ESTABLISHMENT PRODUCING NEW DATA AND SYNTHESIZING OLD INFORMATION IN THE LIGHT OF NEW IDEAS. THE NEW DATA BASICALLY SHOULD COME FROM MAPPING, BOTH BEDROCK AND SURFICIAL GEOLOGY.
 - 3) DO NOT CURTAIL MAPPING. THIS IS THE RAISON D'ETRE FOR THE G.S.C.'S EXISTENCE. FUNDS SHOULD NOT BE DIVERTED FROM THIS MAJOR TASK TO PAY FOR OTHER SIDE ISSUES SUCH AS THE URP SURVEY, ETC.
 - 4) EXPAND SURFICIAL GEOLOGY MAPPING. THE CURRENT SCOPE OF WORK IS TOTALLY INADEQUATE. IDEALLY EVERY BEDROCK MAP SHOULD HAVE A SURFICIAL GEOLOGY OVERLAY. SURVEYS SHOULD

BE CARRIED OUT TO ASSIST IN MINERAL EXPLORATION AND NOT ONLY FOR PIPELINE ROUTES AND ENVIRONMENTAL STUDIES: WHO DECIDES ON THESE PRIORITIES?

5) REGIONAL GEOCHEMICAL SURVEYS ARE SELDOM CURRENT OR UP-TO-DATE. SUCH SURVEYS SHOULD BE RELATED TO PROJECTED FUTURE COMMODITY NEEDS AND COMPLETED BEFORE THE TIME OF NEED ARRIVES AND NOT LATER AS IS GENERALLY THE CASE.

6) THE G.S.C. SHOULD END ITS PROSPECTING WHICH IS CARRIED OUT IN THE DISGUISE OF GEOCHEMICAL "FOLLOW-UP" SURVEYS. THERE IS NO NEED TO COMPETE WITH INDUSTRY IN THIS ASPECT.

7) WHY DOES THE G.S.C. NOT CONSULT INDUSTRY ON SELECTION OF AREAS TO BE MAPED OR COVERED BY REGIONAL AIRBORNE AND/OR GEOCHEMICAL SURVEYS? SUCH SELECTED AREAS SHOULD BE PUBLICIZED IN ADVANCE SO THAT INDUSTRY IS AWARE OF WHAT IS HAPPENING. THIS LACK OF COMMUNICATION IS ONE OF THE G.S.C.'S MAJOR WEAKNESS.

8) IN AN ATTEMPT TO SPEED UP AVAILABILITY OF DATA THE RELEASE BY OPEN FILES HAVE BEEN STARTED. THAT IS AN EXCELLENT PLAN, HOWEVER, IT SHOULD NOT REPLACE FORMAL PUBLICATION OF RESULTS. THESE FINAL REPORTS ARE LAGGING YEARS BEHIND. CAN THEIR PRODUCTION NOT BE SPEEDED UP?

1014 I THINK IT IS A MATTER OF THE OVER ABUNDANCE OF RESEARCH PUBLICATIONS AND REVIEWS. THERE IS NOT TIME TO READ EVERYTHING AND ONLY A COMPANY WITH A RESEARCH PERSON OR DEPARTMENT IS LIKELY TO READ IT REGULARLY.

1015 PERFECT AS IS.

1019 COMMENTS: (1) AS INCREASE IN TRANS PROVINCIAL COMPILATIONS WAS DONE FOR THE ABITIBI AREA FROM TIMMINS TO VAL D'OR. AT LAST A STRATIGRAPHIC CORRELATION WAS DONE IN THIS REGION. COMPILATIONS SUCH AS THE APPALACHIAN OROGEN STUDY SHOULD BE APPLIED ON THE PRECAMBRIAN TO SYNTHESIZE THE MAJOR STRUCTURES. (2) REDUCE THE REGIONAL, GEOCHEMICAL SURVEYS AND EXPEND THE FUNDS IN INCREASED 1:50,000 MAPPING. (3) ELIMINATE THE GEOPHYSICS DIVISION AND APPLY THE FUNDS TO A GOVERNMENT INDUSTRY SUPPORTED RESEARCH DIVISION EQUIVALENT TO AUSTRALIA'S CSIRO. THIS DIVISION COULD BE EXPANDED TO INCLUDE THE GSC COMMODITY SPECIALISTS.

1020 COMMENTS: MORE FREQUENT PUBLICATION - CONCENTRATE MORE ON METALLOGENIC STUDIES.

1021 EMPHASIS ON TIMELINESS. RAW DATA AS SOON AS IT IS AVAILABLE -GEOLOGICAL MAPS AS WHITE PRINTS -GEOCHEM DATA AS WHITE PRINTS WITH NUMBERS - GIVE UP THE SYMBOLS - FORGET THE STATISTICS WE'LL DO OUR OWN. GSC DATA DOES NOT BELONG TO GSC SCIENTISTS - IT IS NOT PERSONAL PROPERTY - IF THEY ARE "SCOLDED" ON IDEAS BY OTHERS THAT IS TOO BAD. PERHAPS THAT WOULD BE MORE INCENTIVE FOR TIMELY, LESS FORMAL PUBLICATION.

- 1024 COMMENTS: ECONOMIC GEOLOGY: (1) DEVELOPMENT/UPDATE OF MINERAL DEPOSITS I.E. MAP 1252A MAPS (1 5,000,000) FOR SEPARATE TYPES OF ORE DEPOSITS AND ALSO SMALLER SCALE DISTRICT MAPS OF PRINCIPAL MINING DISTRICTS, WITH COVERING NOTES. (SHOULD ALSO USE DATA FROM EMR REPORT 181 - POTENTIAL ORE DEPOSITS) (2) NEED REVIEW PAPERS (MODELED ON GSC PAPER 72-22) DESCRIBING OTHER DEPOSIT TYPES IN CANADA. (3) NEED UPDATE OF CANADIAN TECTONIC - STRATIGRAPHIC CORRELATION CHART, SHOWING STRATEGIC LOCATION OF SEDIMENTARY - VOLCANIC HOSTED ORE DEPOSITS (SEE ECONOMIC GEOLOGY REPORT 1). (4) POSSIBLY NEED REVIEW PAPERS COMPILING VARIOUS GEOTECHNICAL METHODS IN THE SEARCH FOR DIFFERENT TYPES OF UNIVERSAL DEPOSITS.
- 1032 COMMENTS: HIGHER PROFILE BY ORGANIZING INFORMAL WORKSHOPS OF THE VARIOUS UNITS TO BRING THESE ACTIVITIES TO THOSE INTERESTED. A LARGE WORKSHOP WHICH ENCOMPASSES ALL ASPECTS OF GSC ACTIVITIES IS SOMETIMES OVERLOOKED BY INDUSTRY BECAUSE THE SPECIAL INTEREST OF AN INDUSTRY DELEGATE MAY ONLY RECEIVE LIMITED COVERAGE. SMALLER WORKSHOPS BY THE INDIVIDUAL SPECIALTY DEPARTMENTS WOULD BE MORE EFFECTIVE.
- 1042 COMMENTS: FIRSTLY, AND ABOVE ALL ELSE, MORE OF IT THAT IS PURELY GEOLOGICAL, AND REPRESENTS ACTUAL BASIC DATA ON THE GEOLOGY OF THE NATION. THE IDEA THAT THE NATION HAS BEEN MAPPED IS FALLACIOUS. THE ORIGINAL 'MAPS' WERE OFTEN ONLY OF A RECONNAISSANCE NATURE LEAVING A SUBSTANTIAL NEED TO RETURN AND ESTABLISH PROPER GEOLOGICAL MAPS (I.E. THREE DIMENSIONALLY CONSISTENT STRATIGRAPHIES, STRUCTURES, ETC) RATHER THAN "LITHOLOGICAL DISTRIBUTION PLOTS". BUT MORE IMPORTANTLY ALL MAPPING NEEDS ALMOST CONSTANT REVISION AS AN ONGOING PROCESS AS NEW CONCEPTS ARE DEVELOPED AS TO WHAT ARE SIGNIFICANT MAPABLE AND RECORDABLE CRITERIA OF MINERALOGY, FABRIC, CHEMICAL COMPOSITION, STRUCTURES, PALAEONTOLOGY, ETC., AND EQUALLY WHAT ARE MEANINGFUL RELATIONSHIPS BETWEEN VARIOUS UNITS. MOST EXISTING MAPS ARE WOEFULLY INADEQUATE AS A DATA BASE AGAINST WHICH TO COMPARE MODERN CONCEPTS - PARTICULARLY ON THOSE NEW CRITERIA CONSIDERED RELEVANT TO THE DISCOVERY OF MINERAL DEPOSITS. AND IT IS MINERAL DEPOSITS THAT CONSTITUTE THE ONLY REAL NATIONAL MINERAL RESOURCE BASE FOR EXPANSION OF THE NATIONAL WEALTH TO MEET VARIOUS SOCIAL GOALS. PERHAPS LESS IMPORTANT, BUT STILL REQUIRING CONSIDERABLE EXPANSION OF OUTPUT ARE METALLOGENIC AND MINERAL DEPOSIT STUDIES THAT AID IN THE GENERATION OF EXPLORATION CONCEPTS. IT IS THE CONCEPTS DERIVED FROM THESE STUDIES TOGETHER WITH THE BASIC MAP-DATA THAT LEAD TO NEW EXPLORATION PROGRAMS, WHICH ARE THE ONLY WAY TO INCREASE THE REAL - AS AGAINST THE ARTIFICIAL - NATIONAL MINERAL RESOURCES BASE.
- 1043 COMMENTS: SPEED UP REPORTING - MAKE REPORTS SUCH AS

MEMOIRS LESS ELABORATE. PAPERS ARE TOO SLOW FOR WHAT THEY ARE - PERHAPS BOTTLE NECK IN CARTOGRAPHY EDITING JUST LIKE AT OGS. - GET THIS GROUP MODERNIZED.

- 1046 COMMENTS: MORE STAFF FOR GSC LIBRARY SYSTEM WHICH PERFORMS MARVELOUSLY WELL - DESPITE BEING SHORT STAFFED. AN ENLARGED ACCESSION LIST OR TABLE OF CONTENTS OF JOURNALS CIRCULATED TO SELECT LIBRARIES WOULD BE HELPFUL.
- 1047 COMMENTS: I DON'T KNOW WHAT SITS IN VARIOUS ROOMS AT THE GSC BUT A RECENT INCIDENT MAKES ME WONDER. I REFER TO OF617, "PLACER PAN CONCENTRATES, HAYESVILLE AND NAPADOGAN MAP AREAS (21 J/1017), CENTRAL NEW BRUNSWICK" WHICH WAS RELEASED IN MAY 1979. THIS RELEASE GIVES RESULTS FOR SN,W AND OTHER ELEMENTS FOR SAMPLES COLLECTED IN 1961 OR EARLIER| IN IGNORANCE THAT THE GSC HAD EVER DONE THIS WORK, MY COMPANY SAMPLED THE SAME AREA IN 1978 AND OBTAINED RESULTS ESSENTIALLY IDENTICAL TO THE GSC RESULTS (THOUGH WE CAN BE SPECIFIC IN TERMS OF AMOUNTS OF VARIOUS ELEMENTS BECAUSE OF EVOLUTION IN ANALYTICAL TECHNIQUES). I CAN ASSURE YOU THAT OF617, IF IT HAD COME OUT IN, 1970 OR 1975 WOULD HAVE BEEN A USEFUL DOCUMENT. MY POINT IS THAT FOR US THE OBSERVATIONS, THE DATA, ARE WHAT ARE IMPORTANT AND BY WHATEVER ROUTE (THAT IS NOT IMPORTANT) EVERY EFFORT SHOULD BE MADE TO GET THEM OUT AS SOON AS POSSIBLE.
- 1050 COMMENTS: FAST PUBLICATION;
- 1053 COMMENTS: WHY IS THE GSC IN OTTAWA, WITHOUT A BRANCH IN TORONTO? A BRANCH LOCATED WHERE MOST OF THE ACTIVITY IS, WITH A WELL STOCKED LIBRARY AND INFORMATION RETRIEVAL OUTLET WOULD BE VERY DESIRABLE.
- 1056 COMMENTS: A PUBLICATION SIMILAR TO THAT OF THE U.S.G.S. PROFESSIONAL PAPER. G.S.C. BULLETINS ARE SOMEWHAT SIMILAR BUT APPEARS TO BE MUCH MORE SIMILAR IN THEIR SUBJECT MATTER AND TOPICS. PERHAPS THIS IS PURELY A FUNCTION OF THE DIFFERENT RESEARCH TYPES ENGAGED IN (OR PERHAPS A FUNCTION OF LESS MONEY).
- 1061 COMMENTS: WORKSHOPS - OPEN HOUSE, SUCH AS SOME PROVINCIAL DEPARTMENT OF MINES ARE DOING - PRE-PUBLICATION OF MAPS - FIELD TRIPS.
- 1062 COMMENTS:
 1. EXPAND 1:50,000 TOPO COVERAGE.
 2. COMPUTOR PROGRAMS DEVELOPED BY GSC AND OTHER EMR DIVISIONS COULD BE MADE AVAILABLE TO INDUSTRY.
 3. EXPAND SERVICES AT LOCAL GSC OFFICES.
 4. POSSIBLY MORE RESEARCH ON EXPLORATION AND MINING NORTH OF 60 DEGREES.
 THIS QUESTIONNAIRE IS A COMPILATION OF OPINIONS OF ALL

TECHNICAL PERSONNEL AND THEREFORE REPRESENTS THE COMPANY VIEW.

- 1065 COMMENTS: LESS EFFORT ON ELABORATE REPORTS AND MORE EMPHASIS ON BASIC DATA COLLECTION. ATTEMPT TO MOVE AWAY FROM THESIS TYPE APPROACH TO ALL SUBJECT MATTER, SAY BY CHANGING BALANCE IN STAFF TOWARDS MORE FIELD WORKERS, SO THAT BASIC DATA IS COLLECTED AND REPORTED FOR SEVERAL YEARS PRIOR TO THE EFFORT TO DEVELOP A SYNTHESIS.
- 1077 COMMENTS:
CONCENTRATE ON:
1. BASIC 4 MILE MAPPING
2. AIRBORNE MAGNETIC SURVEYS
3. PUBLISH ABOVE IN TIMELY MANNER.
- 1078 COMMENTS: OPENING OF FACILITIES SUCH AS LIBRARIES AND MORE INVITATIONS TO USE THESE AND OTHER FACILITIES. OFFERING OF SCIENTIFIC FACILITIES SUCH AS ELECTRON MICROPROBE WORK FOR SET FEES. MORE MICROFILM PUBLICATIONS SUCH AS INDEXES OF MAPS AND REPORTS COLOR MICROFILM OF GEOLOGY MAPS, ETC.
- 1082 COMMENTS: I THINK THE EFFORT IN THE CORDILLERA HAS BEEN FAIRLY EFFECTIVE, BUT I WOULD LIKE TO SEE A BIT MORE EXCHANGE WITH PROVINCIAL GEOLOGISTS IN VICTORIA. IT APPEARS THAT PROFESSIONAL JEALOUSY TENDS TO PRECLUDE THIS, BUT IT COULD BE OVERCOME.
- 1087 COMMENT: MOST HERE SEEM QUITE SATISFIED WITH G.S.C. OUTPUT - OF COURSE THERE ARE THE USUAL PERSONAL DISAGREEMENTS| MY MAIN GRIPE IS THE LACK OF STANDARDIZATION OF MAP SCALES IN NON MAP PUBLICATIONS WHICH WITH XEROX REDUCTIONS WOULD ALLOW ONE TO EASILY AND ROUTINELY KEEP COMPILATIONS AT 1:1,000,000 SCALE UP-TO-DATE.
- 1088 COMMENTS: (1) CONSIDER REPUBLICATION OF CERTAIN PAST PUBLICATIONS OR MAPS IN HIGH DEMAND IN CERTAIN AREAS OF INTEREST. THIS COULD BE DONE BY A QUESTIONNAIRE.
- 1089 COMMENTS: REPRINTING OF OUT OF PRINT MATERIAL, ESPECIALLY MEMOIRS AND GEOLOGICAL MAPS. EMPHASIS ON 1) FULL COVERAGE AND 2) UPDATE OF 1:250,000 GEOLOGICAL MAPS.
- 1092 IN GENERAL WE ARE WELL SATISFIED WITH THE OUTPUT OF THE GSC. IT SHOULD CERTAINLY NOT BE DIMINSHED IN ANY ASPECT. QUALITY IS HIGH; ANY IMPROVEMENT SHOULD BE IN THE AREA OF TIMELINESS OF REPORTING WHICH COULD BE ACHIEVED IN PART BY MORE SUBSTANTIAL FUNDING.
- 1093 COMMENTS: MORE EFFORT SHOULD BE MADE TO CONSULT INDUSTRY ON MAPPING PROGRAMS AND ON APPLIED GEOPHYSICAL SURVEYS.

- 1095 COMMENTS: MORE COLOURED MAPS WOULD BE MOST HELPFUL. MANY PRELIMINARY MAPS ARE SUCH A JUNGLE OF ATTITUDES THAT THEY IMMEDIATELY DISCOURAGE THE VIEWER.
- 1096 COMMENTS: MORE SPEED WITH PUBLICATIONS SO WE CAN USE THE DATA. MORE STUDIES OF THE ECONOMIC POTENTIAL AND MINERAL OCCURRENCES OF AN AREA, E.G THE "GEOLOGY AND MINERAL DEPOSITS OF 92G AND 92F (E1/2)" IN OPEN-FILE FORM, (A) 1:250,000 OR 1:100,000. MORE ECONOMIC GEOLOGY STUDIES; DEVOTE MORE SPACE IN BULLETINS AND MEMOIRS TO DISCUSSION OF ECONOMIC GEOLOGY. MORE COMPILATIONS, E.G. "MOLYBDENUM DEPOSITS OF B.C.", "SHALE-HOSTED PB-ZN DEPOSITS OF THE CORDILLERA", ETC.
- 1116 I AM SURE WE COULD USE THE INFORMATION (OR PARTS OF IT) GENERATED BY GSC PERSONNEL - IF WE KNEW WHAT INFORMATION WAS AVAILABLE. WE DO NOT GET ANY BULLETINS OR REPORTS ON A REGULAR BASIS. IF WE HEAR OF A PUBLICATION THAT MAY BE OF INTEREST, THEN WE SPECIAL ORDER OR COPY.
- 1128 COMMENT: G.S.C. OUTPUT IS SATISFACTORY FOR OUR PURPOSES AT THE PRESENT TIME.
- 1130 COMMENTS: (1) REPRINT USEFUL PUBLICATIONS AND MAPS WHICH ARE CURRENTLY OUT OF PRINT.
(2) PRODUCE AND MAKE AVAILABLE 1:250,000 SCALE, 125,000 SCALE AND 50,000 SCALE BLACK AND WHITE AND COLOUR AIR PHOTO MOSAICS FOR MINERALIZED AREAS. KEEP INDICES FOR ALL PROVINCIAL AND FEDERAL AIR PHOTOGRAPHY, AND LANDSAT IMAGERY OR MICROFICHE FOR PUBLIC USE AT REGIONAL OFFICES.
(3) IN COLLABORATION WITH PROVINCIAL DEPARTMENT OF MINES SET-UP MORE REGIONAL LIBRARIES.
- 1133 COMMENTS: OVERALL GOOD JOB BUT PRODUCTION OF SOME REPORTS, SEEMS TO REQUIRE A LONG PERIOD OF TIME.

SECTION H

- 1002 CIP DATA ON ALL PUBLICATIONS.
- 1028 COMMENTS: 1. IT WOULD BE VALUABLE TO HAVE A STANDARD SET OF GEOLOGICAL MAPS FOR THE ENTIRE COUNTRY AT A SUGGESTED SCALE OF 1:250,000 SCALE BASED ON THE N.T.S. SYSTEM.
2. IT WOULD BE VERY USEFUL TO HAVE G.S.C. INDEX MAPS UPDATED ON AN ANNUAL BASIS.
3. IMPROVEMENT IN THE AVAILABILITY OF G.S.C.'S ANALYTICAL COMPUTER PROGRAMS (GEOPHYSICAL AND GEOCHEMICAL) IS DESIRABLE.

- 1103 GREATER EMPHASIS ON COMPLETION OF REGIONAL MAPPING AND PROMPT PUBLICATION OF RESULTS.
- 1104 GSC SPONSORED COURSES AND/OR WORKSHOPS (OTHER THAN CONFERENCES) FOR EXPLORATION INDUSTRY - E.G. METALLOGENY AND TECTONIC HISTORY OF NORTH AMERICAN CORDILLERA. ADMITTEDLY, THIS ROLE IS ALREADY PARTIALLY FULFILLED BY OTHER OUTPUT, BUT MOST EXPLORATIONISTS HAVE NEITHER THE BACKGROUND NOR THE TIME TO KEEP UP WITH THE WEALTH OF NEW INFORMATION THAT HAS ACCUMULATED IN THE LAST DECADE.
- 1120 A YEARLY WORKSHOP - PRESENTATION OF RESULTS, ACTIVITIES SUMMARIES.
- 1123 (H-3) -
 (1) - THE GSC SHOULD BE THE MAJOR SCIENTIFIC RESEARCH ESTABLISHMENT PRODUCING NEW DATA AND SYNTHESIZING OLD INFORMATION IN THE LIGHT OF NEW IDEAS. THE NEW DATA BASICALLY SHOULD COME FROM MAPPING, BOTH BEDROCK AND SURFICIAL GEOLOGY.
 (2) - DO NOT CURTAIL MAPPING. THIS IS THE RAISON D'ETRE FOR THE GSC'S EXISTENCE. FUNDS SHOULD NOT BE DIVERTED FROM THIS MAJOR TASK TO PAY FOR OTHER SIDE ISSUES SUCH AS THE URP SURVEYS.
 (3) - EXPAND SURFICIAL GEOLOGY MAPPING. THE CURRENT SCOPE OF WORK IS TOTALLY INADEQUATE. IDEALLY EVERY BEDROCK MAP SHOULD HAVE A SURFICIAL GEOLOGY OVERLAY.
 (4) - THE GSC SHOULD END ITS PROSPECTING WHICH IS CARRIED OUT IN THE DISGUISE OF GEOCHEMICAL "FOLLOW-UP" SURVEYS. THERE IS NO NEED TO COMPETE WITH INDUSTRY IN THIS ASPECT.
 (5) - WHY DOES THE GSC NOT CONSULT INDUSTRY ON SELECTION OF AREAS TO BE MAPPED OR COVERED BY REGIONAL AIRBORNE AND/OR GEOCHEMICAL SURVEYS? SUCH SELECTED AREAS SHOULD BE PUBLICIZED IN ADVANCE SO THAT INDUSTRY IS AWARE OF WHAT IS HAPPENING. THIS LACK OF COMMUNICATION IS ONE OF THE GSC'S MAJOR WEAKNESS.
 (6) - IN AN ATTEMPT TO SPEED UP AVAILABILITY OF DATA THE RELEASE BY OPEN FILES HAVE BEEN STARTED. THAT IS AN EXCELLENT PLAN, HOWEVER, IT SHOULD NOT REPLACE FORMAL PUBLICATION OF RESULTS. THESE FINAL REPORTS ARE LAGGING YEARS BEHIND. CAN THEIR PRODUCTION NOT BE SPEEDED UP?
- 1125 1. MORE EMPHASIS ON TRADITIONAL FIELD STUDIES (I.E. - MORE DETAILED MAPPING; MORE REINTERPRETATIONS; MORE PROBLEM SOLVING)
 2. MORE RIGID ADHERENCE TO NORMAL REPORTING AND PUBLICATION SCHEDULES AND DEADLINES, WITH THE NON-PRODUCERS AND DEADWOOD TRANSFERRED TO NEW REGIONAL OFFICES IN AUCK ARM, SACHS HARBOUR AND GOOSE BAY.
- 1126 TO PUT OUT USEABLE DATA AS QUICKLY AS POSSIBLE, TO MAINTAIN THE ACCURACY. THE OPEN FILE WAS A GOOD APPROACH. I HEAR MANY RUMOURS THAT SOME DATA IS HELD UP

UNTIL A FRENCH TRANSLATION IS AVAILABLE, IF THIS IS SO THE USEFULNESS OF GSC IS A USELESS TOPIC AS IT SERVES ONLY ITS POLITICAL MASTER WHO HAVE NO SCIENTIFIC FEELINGS.