



Ministry of
Energy, Mines and
Petroleum Resources
Hon. Jack Davis, Minister

GEOLOGICAL SURVEY BRANCH 1986-87 PLAN

VICTORIA, JUNE 1986

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MISSION STATEMENT

The mission of the Geological Survey Branch is:

To aid and stimulate the growth of the mining industry for the social and economic benefit of the people of British Columbia by conducting geoscientific surveys and by inventorying and analysing the geology and mineral deposits of the Province.

SUPERORDINATE GOALS

The work of the Geological Survey Branch contributes to four main, inter-related goals that meet the role of the Division - "providing information and advice on the geology and mineral resources of the British Columbia land mass and offshore regions".

These goals are:

1. To develop and advance the basic geoscientific knowledge of B.C., by undertaking geoscientific surveys and related research, and to aid and stimulate the growth of the mineral resource industry.
2. To analyse information on the distribution, nature and magnitude of the Province's mineral, coal and industrial mineral resources.
3. To develop the geoscientific information needed by Governments for effective land use and mineral policy decisions.
4. To collect and inventory all information relating to the geology, mineral resources, and exploration activities in B.C. in order to provide a comprehensive inventory for government, industry and public use.

There is an ongoing demand for geoscientific information and advice; and in 1985 and 1986 the Geological Survey Branch implemented two new programs to expand and augment the restraint-diminished core programs. These new programs and increased funding will better enable the Branch to meet its goals.

NEW PROGRAMS

1. The \$10 million Canada-British Columbia Mineral Development Agreement (1985-1990). Of this, \$6.8 million will augment Geological Survey Branch.
2. F.A.M.E. 1986-87 consists of \$5 million in cash grants, including \$200,000 for Prospector Assistance, \$1.3 million for Accelerated Mine Exploration, and \$3.5 million for a Mineral Exploration Incentive Program.

ORGANIZATION, SECTION & SUB-SECTION GOALS

In April 1986 the Branch was reorganized to give clear mandates and responsibilities to the sections so they can better deliver the core programs and projects under the MDA and F.A.M.E. Coal responsibilities were combined in one subsection, and a regional mapping subsection was created.

The Branch now consists of four sections comprising eight subsections.

Manpower totals 49 full time employees (FTE), 22 contract staff (12 month contracts), and 33 temporary (summer contract) staff. Total core ('A' base) budget is about \$3 million; it is augmented by \$1.8 million from MDA, and \$100,000 from F.A.M.E.

ORGANIZATION, SECTION AND SUB-SECTION GOALS

1. MINERAL DEPOSITS AND REGIONAL MAPPING SECTION

GOAL: "MAPPING TODAY FOR RESOURCES TOMORROW"

The three sub-sections of this section are charged with carrying out geoscientific mapping surveys.

MINERAL DEPOSITS SUBSECTION conducts geologic and metallogenic studies of metallic mineral deposits in mining camps and in areas with potential mineral wealth to determine the distribution, origin, mode of formation and exploration guidelines for deposits. In 1986 most studies are gold-related. In 1986-87 the subsection consists of 7 FTE's and 22 contractors; the budget is \$779,483.

REGIONAL MAPPING SUBSECTION conducts systematic 1:50,000 scale geological mapping in selected poorly understood or under-explored parts of the province. Maps of this scale are an essential precursor to effective mineral exploration and for informed land use decisions. In 1986-87 resources of this subsection are 1 FTE and 4 project leaders on contract, 1 technical support person on contract; 12 summer contract staff; the budget is \$870,000.

REGIONAL GEOCHEMISTRY SUBSECTION conducts geochemical orientation and follow-up surveys and carried out research into methods of presenting RGS data and interpretation of the data as they can be used in the search for mineral resources. In 1986-87 this subsection had 1 contract geochemist; the budget is \$75,000.

The section also carries the responsibility for drafting (3 FTE's) and lapidary (1 FTE) services and publications coordination, editing, and quality control (1 FTE).

2. DISTRICT GEOLOGY AND COAL RESOURCES SECTION

This section consists of two subsections.

DISTRICT GEOLOGY SUBSECTION with offices in Smithers, Prince George, Fort St. John, Fernie, Nelson, Kamloops, and Victoria, maintains an up-to-date inventory of the geology, mineral deposits, exploration trends and developments in the districts. Prospector training and advice and consultation to industry and other government departments are also provided. In 1986-87 resources of this subsection were 8 FTE's and \$541,361.

COAL RESOURCES SUB-SECTION collects information on the Province's coal geology and resources and maintains a coal core repository at Fort St. John. In 1986-87 this subsection had 6 FTE's (two shared with the District Geology Subsection) and \$349,783.

3. RESOURCE DATA AND ANALYSIS SECTION

This section comprises three sub-sections.

MINERAL INVENTORY SUBSECTION collects, compiles, approves and interprets mineral exploration data submitted by industry. A library of over 14,000 mineral assessment reports is maintained and approximately 1,000 reports are added annually. In 1986 the library will be available for sale on microfiche format. The information collected from industry is summarized and published annually in the volume Exploration in B.C. In 1986-87 this subsection had 5 FTE's, 4 contract geologists and \$234,347.00.

INDUSTRIAL MINERALS SUBSECTION conducts studies on industrial minerals to determine their distribution and abundance, thereby facilitating resource development and policy formulation. In 1986-87 this subsection had 2 FTE's, 3 contract geologists and \$105,963.00

LAND USE SUBSECTION carries out field and office evaluations of proposed land alienation areas and aids in the development of mineral land use policy. In 1986-87 this subsection had 2 FTE's and \$85,393.00.

4. ANALYTICAL SCIENCES SECTION provides analyses of rock, minerals and ores needed by Branch geologists. The section manages the regional geochemistry survey program and is responsible for certification of assayers in the Province. This subsection had a 86/87 budget of \$637,561 and 7 FTE's.

The Regional Geochemistry Program is funded with \$100,000 from A Base and \$150,000 from MDA.

5. EXECUTIVE STAFF based in Victoria provide management direction and program administration. They are supported by the financial and personnel services of the Finance and Administration Division of the Ministry.

Branch-wide activities, such as the Vancouver Regional Office, the Mineral Development Agreement and the Financial Assistance for Mineral Exploration Program (F.A.M.E.) are handled through this office.

The Vancouver Regional office was opened in 1986 with the goal of promoting and assisting the coordination and development of mineral, coal and other earth resources in B.C.

The goal of the Canada-B.C. Mineral Development Agreement is to help B.C.'s mineral sector adapt to new demands, new markets and new technologies. The major component, which is designed to expand the B.C. geological data base, is being delivered by the Geological Survey Branch.

The F.A.M.E. program is a new incentive program for mineral exploration through a system of cash grants; budget is \$5 million.

In 1986-87 the Executive office had 2 FTEs, one staff member on loan from Resource Data Section, two contract managers and their support staff as well as 1 FTE based in the Vancouver Regional Office.

STRATEGIC PLANS FOR SUBSECTIONS in 1986/1987

- MINERAL DEPOSITS
1. To conduct studies in B.C.'s major and potential gold and volcanogenic massive sulphide camps to understand controls of mineralization and to develop metallogenic models as an aid to effective private sector exploration.
 2. To present talks and publish papers publicizing results of studies, and to promote nationally and internationally exploration and development opportunities in B.C.
 3. To provide useful assistance and scientific leadership to the exploration and mining community through consultation and studies.
 4. To publish a compilation map of B.C.'s gold and silver deposits by July 15th, 1986 (in conjunction with Vancouver Geologist).
 5. To play an active role in the MINFILE redevelopment and in the MINFILE graphics plan.
 6. To provide evaluations as required on FAME applications.
 7. To compile a map of B.C.'s offshore geology and mineral resources and to assist in offshore mineral policy formulation.
- REGIONAL MAPPING
1. To conduct five, regional 1:50,000 scale, mapping projects to evaluate mineral potential and encourage mineral exploration in interesting, under-explored areas.
 2. To update the mineral inventories of these map areas.
 3. To build a geologic database for future regional and site specific studies.
 4. To present talks and publish papers and maps publicizing results of studies.

5. To evaluate Landsat and SPOT satellite imagery and as an aid to resource evaluation in B.C.

GEOCHEMISTRY

1. To complete orientation surveys for all topographic/climatic regions of the Province as a precursor to regional sampling programs. In 1986 the Coast Range will be surveyed.
2. To analyze and interpret data generated by past Regional Geochemical Survey Programs to help identify target areas for exploration and to find ways of better presenting the data.
3. To provide a complete geochemical data base in a convenient and accessible manner in floppy disk format by January 1987.

DISTRICT GEOLOGY

1. To map selected 'hot' exploration targets in B.C., and publish results in Fieldwork and/or Exploration in B.C.
2. To monitor exploration and publish findings in the annual Exploration Review volume and papers in Northern Miner, Northwest Prospector, etc.
3. To publish a map of B.C. Mines and significant deposits by January 20, 1987.
4. To administer and monitor the Prospector Assistance Program under F.A.M.E.
5. To organize, coordinate and deliver the 10th Annual Mineral Exploration course for Prospectors and basic level courses in the districts.
6. To publish a new manual "Introduction to Prospecting" by September 1986.
7. To edit in a timely manner all entries for the annual volume Exploration in B.C.
8. To assist in land use studies as required.

9. To update MINFILE entries for all deposits visited in the field in 1986.
10. To review current prospectuses, Stage I and Stage II reports as an advisory service to the Mine Development Steering Committee.

COAL RESOURCES

1. To map selected parts of the Peace River and S.E. Coalfield and publish results in Open File and Fieldwork reports.
2. To complete a deposit model for Mount Klappan by July 31, 1986.
3. To complete a paper on geology and coal resources of the Dominion Coal Blocks.
4. Reorganize the coal assessment report filing system into a sequential format by July 31, 1986.
5. Design and commence a Coal Deposit (Property) File (additional to COALFILE). Joint project with GSC.
6. Design and build a computer file on core stored at Charlie Lake by March 31, 1987 and advertise this facility. This is dependent on acquiring a microcomputer.
7. Write and publish a pamphlet on COALFILE by November 1986.
8. Organize and participate in the Coal Forum 1986 in Calgary in November. Five papers and four posters to be presented.
9. Complete review of Coal Act Regulations by June 1, 1986.
10. Design and implement hard and soft Coal Act Regulation "Schedule B" filing systems.
11. Approve and file coal assessment reports within 60 days of receipt.
12. Prepare annual entries on coal exploration for Exploration in B.C.

MINERAL INVENTORY 1. To process (catalogue, check, approve, edit, notify authors) assessment reports within 60 days of receipt.

2. To make assessment reports available on microfiche immediately after the confidentiality period.

3. To redesign the assessment report information system to provide on line service for tracking status of reports, index, PAC, and Exploration in B.C. Includes computer assisted mapping. This is a major project in FY 86/87.

4. To publish Exploration in B.C. by July 1, annually. 1985 by July 15, 1986.

5. To complete the redevelopment of MINFILE and place the system in full production by August 31, 1986.

6. To make MINFILE the premier mineral, coal, and industrial mineral data base for the Province by maintaining accurate and timely mineral occurrence data.

7. To develop computer-assisted mapping graphics for MINFILE generated mineral inventory maps by March 31, 1987.

8. To conduct a written review of the geology, mineralization and mineral potential of escheated Crown Grants by July 31, 1986.

INDUSTRIAL
MINERALS

1. To compile an up-to-date inventory of industrial minerals in B.C. and publish results in a bulletin on Industrial Minerals in B.C. by 1990.

2. To include all known industrial minerals occurrences in MINFILE by 1988.

3. To carry out field, laboratory and market research on following minerals in 86-87; phosphates, gypsum, olivine, dimension stone, bentonite, and rare metals in carbonatites and kimberlites, and publish results.
4. To assist executive staff in developing policy and regulatory changes for industrial minerals.
5. To eliminate manuscript backlog on aggregates, silica, and barite by mid-1987. Aggregate and silica to be completed and published in 1986.
6. To promote industrial minerals in B.C. at Northwest Mining Convention in December 1986 by talks and a display.

LAND USE

1. To preserve the land base for exploration by conducting field and office studies of proposed land alienation areas. In 1986 fieldwork in Chilko Lake Park proposal will be completed and results published.
2. To develop an agreement with LPH on conducting mineral resource assessments within recreation areas prior to designation as single use.
3. To respond where necessary to any directives initiated by the Wilderness Advisory Committee.
4. To computerize records management and data manipulation procedures by April 31, 1987. This is dependent on acquiring a microcomputer.

ANALYTICAL
SCIENCES

1. To purchase, install and have operational the new XRF system by September 30, 1986.
2. To increase analytical capabilities and minimize turnaround time by consolidating as much of the analytical work load as possible on the automated XRF.
3. To establish better relations with customers (staff and contract geologists) through regular meetings, talks, and publications.
4. To publish a laboratory catalogue and manual for users by December 31, 1986.
5. To introduce a computerized sample management and reporting system by December 31, 1986.
6. To increase flexibility of staff responsibilities through training, visits to other laboratories and rotation within the laboratory.
7. To initiate a charge-back scheme for MDA work by September 1, 1986.
8. To investigate the feasibility of a charge-back scheme to the sections for all analytical services for FY 87/88.
9. To manage the MDA and 'A' Base 1986/87 regional geochemistry program.
10. To participate in and provide advice on coal liquefaction studies and to promote utilization of B.C. coals in foreign markets.
11. To assist in the maintenance of quality control of B.C.'s commercial and mine site laboratories.

VANCOUVER
GEOLOGIST

1. To ensure effective communication, consultation, and liaison between the Geological Survey Branch in Victoria and senior industry, government and university officials in Vancouver.
2. To assess exploration trends and concepts in the Province by conducting field studies. In 1986 this will involve selected gold deposits in southern B.C.
3. To assist in the evaluation of F.A.M.E. applications as a member of the F.A.M.E. Management Committee.
4. To review current prospectuses and Stage I and II Reports, as an advisor to the Mine Development Steering Committee.
5. To review and recommend revisions to Mineral Act.
6. To establish an effective office in Vancouver.

EXECUTIVE STAFF

1. To provide overall direction to Branch.
2. To monitor and control budgets.
3. To publicize Branch programs and achievements in published papers, attendance at meetings and conferences, speeches, etc.
4. To foster consultation with industry and academia as represented by the Technical Liaison Committee, to ensure programs are relevant and timely.
5. To ensure effective communication with other Directors in the Division and with Senior Ministry staff.

6. To ensure adequate funding for Branch activities.
7. To ensure morale in the Branch remains high and the Branch is a good place in which to work.
8. To assign staff and resources as required to meet Branch objectives.
9. To ensure Branch projects and assignments are delivered on time, on budget, and to a high standard.
10. To acquire word processors for all Victoria-based secretaries in 86/87 and district secretaries in 87/88.
11. To accelerate the computerization of the Branch with respect to data mangement and scientific computer applications.
12. To complete the Performance Planning Evaluation and cycle with all Managers in the Branch and to institute the process in the sections.