



**Province of British Columbia**  
**Ministry of Energy, Mines and Petroleum Resources**

**GEOLOGICAL SURVEY BRANCH**  
**1987-88 PLAN**

**Victoria, June 1987**

## **GEOLOGICAL SURVEY BRANCH 87/88 PLAN**

### **MISSION STATEMENT**

The mission of the Geological Survey Branch is:

To aid, stimulate and promote the growth of the mining industry for the social and economic benefit of the people of British Columbia by conducting geoscientific surveys, by inventorying and analysing the geology and mineral deposits of the Province and by disseminating this information in a timely manner.

### **SUPERORDINATE GOALS**

The work of the Geological Survey Branch contributes to five main, inter-related goals that contribute to the overall mission of the Mineral Resources Division - "stimulate, facilitate and guide mineral exploration development and production for the overall benefit of the Province."

These goals are.

1. To develop and advance the basic geoscientific knowledge of B.C., by undertaking and supporting geoscientific surveys and related research, to enhance the discovery and development of the Province's mineral resources.
2. To analyse and interpret information on the distribution, nature and magnitude of the Province's mineral, coal and industrial mineral resources.
3. To collect, compile and collate all information relating to the geology, mineral resources, and exploration activities in B.C. in order to provide a comprehensive database for government, industry and public use.
4. To develop and communicate the geoscientific information needed by Governments for effective land use and mineral policy decisions.
5. To disseminate the information collected in a timely manner through publications, scientific meetings, trade shows, and an annual open house.

### **NEW PROGRAMS**

There is an ongoing demand for geoscientific information and advice. In 1985 the Geological Survey Branch implemented the Canada-B.C. Mineral Development Agreement to expand and augment the restraint-diminished core programs. In 1987-88 the MDA geoscience budget is \$1,571,000.

In 1986/87 the Branch was given responsibility to administer a one year, \$5 million, Financial Assistance for Mineral Exploration Program (F.A.M.E.). This program has been renewed for 1987/88.

The 1987/88 Base Budget of the Geological Survey Branch includes a new \$2 million package to enhance the geoscientific surveys. This enhanced package has been allocated as follows, and allows delivery of new regional mapping and geochemistry programs from the Base budget.

<u>SECTION</u>	<u>BASE</u>	<u>BASE ENHANCEMENT</u>	<u>TOTAL BASE BUDGET</u>
Management	\$111,670	\$194,800	\$ 306,470
Vancouver Geologist	\$ 48,200	\$ 62,000	\$ 110,200
Regional Mapping		\$500,000	\$ 500,000
Mineral Deposits	\$699,500	\$339,000	\$1,038,500
District Geology	\$493,100	\$ 94,000	\$ 587,100
Coal Resources	\$298,600	\$221,200	\$ 519,800
Resource Data	\$430,080	\$130,000	\$ 560,080
Industrial Minerals	\$110,720	\$ 57,000	\$ 167,720
Geochemistry		\$105,000	\$ 105,000
RGS	\$100,000	\$220,000	\$ 320,000
Laboratory	\$283,800	\$ 77,000	<u>\$ 360,800</u>
		GRAND TOTAL	\$4,575,670

#### **ORGANIZATION, SECTION & SUBSECTION 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. The Branch now consists of four sections comprising eight subsections.

Manpower in 1987-88 totals 53 full time employees (FTE), 44 contract staff (12 month contracts), and 52 temporary (summer contract) staff.

## ORGANIZATION, SECTION AND SUBSECTION GOALS

### 1. MINERAL DEPOSITS AND REGIONAL MAPPING SECTION

GOAL: "MAPPING TODAY FOR RESOURCES TOMORROW"

The section consists of Mineral Deposits, Regional Mapping and Geochemistry subsections.

The primary objectives are:

- TO MAINTAIN AN EFFECTIVE GEOLOGICAL SURVEY BY CONDUCTING RELEVANT FIELDWORK.
- TO PRODUCE TIMELY, AUTHORITATIVE AND INNOVATIVE SCIENTIFIC OUTFLOW.
- TO MAINTAIN A PRESENCE AND PERSONALITY WITHIN THE EXPLORATION COMMUNITY.

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

MINERAL DEPOSITS SUB-SECTION 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 1987 most studies are gold-related. In 1987-88 the subsection consists of 7 FTE's, 7 contractors; the budget is \$1,038,500 (A-base) and \$188,000 (MDA).

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 1987-88 resources of this subsection are 4 FTE's and 4 project leaders on contract, 1 technical support person on contract; 8 graduate geologists on contract, and 16 summer contract staff; the budget is \$710,000 (MDA) and \$500,000 (enhanced A base).

## GEOCHEMISTRY SUBSECTION

REGIONAL GEOCHEMISTRY SUBSECTION conducts geochemical orientation and follow-up surveys and carries out research into methods of presenting RGS data and interpretation of the data as they can be used efficiently in the search for mineral resources. In 1987-88 this subsection had 1 FTE, 1 contract geochemist and 2 summer students; the budget is \$105,000.

Regional Geochemical Survey sampling program is also the responsibility of this subsection. RGS budget is \$320,000 (A base) and \$200,000 (MDA).

## 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 1987-88 resources of this subsection were 8 FTE's and \$587,100.

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 1987-88 this subsection had 6 FTE's (two shared with the District Geology Subsection) and \$519,800.

## 3. RESOURCE DATA AND ANALYSIS SECTION

This section comprises three subsections.

MINERAL INVENTORY SUBSECTION collects, compiles, approves and interprets mineral exploration data submitted by industry. A library of over 15,000 mineral assessment reports is maintained and approximately 1,000 reports are added annually. The library is available for public viewing on microfiche at District Geologists' and Gold Commissioners' offices throughout the Province. The microfiche may also be purchased from the Branch's agent,, Victoria Microfilm Ltd. The information collected from industry is summarized and published annually in the volume Exploration in B.C. and the Assessment Report Index. In 1987/88 this subsection had 5 FTE's, 6 contract geologists, and 4 contract support staff, and a budget of \$563,116.

INDUSTRIAL MINERALS SUBSECTION conducts studies on industrial minerals to determine their distribution and abundance, thereby facilitating resource development and policy formulation. In 1987/88 this subsection had 2 FTE's, 6 contract geologists and support staff and a budget of \$407,608.

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 1987/88 this subsection had 2 FTE's and a budget of \$92,132.

4. ANALYTICAL SCIENCES SECTION provides analyses of rock, minerals and ores needed by Branch geologists. The section manages the analytical contracts under regional geochemistry survey program and is responsible for certification of assayers in the Province. This subsection had a 87/88 budget of \$360,800 and 7 FTE's.
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. In 1987/88 this had 2 FTE's, one FTE on loan from Resource Data Section.

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.

#### VANCOUVER 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. In 1987/88 this office had 1 FTE and 1 contract research geologist.

#### MINERAL DEVELOPMENT AGREEMENT

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. MDA administration consists of 1.5 contractor FTE's.

#### F.A.M.E.

The F.A.M.E. program is an incentive program for mineral exploration through a system of cash grants; budget is \$5 million. Fame administration consists of 2 contractor FTE's.

# ANNUAL PLANS FOR SUBSECTIONS in 1987/88

## MINERAL DEPOSITS AND REGIONAL MAPPING SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
1)	To maintain an effective geological survey by conducting fieldwork and providing scientific output and information to the public and industry.	To provide relevant geological information to industry, the public and the Ministry.	BMcM
A)	MINERAL DEPOSITS		
1a)	D. J. Alldrick New project - Sulphurets 104B To produce open file map, MINFILE updates and verbal presentations.	New gold camp study.	DA
1b)	B. N. Church Bridge R. mining camp. For O.F. map, MINFILE updates, reports to Geological Fieldwork and Exploration '87; summary bulletin.	Continuing study of province's largest gold camp.	BNC
1c)	T. Hoy - Purcell Supergroup for summary bulletin and 1:1,000,000 compilation map. - Regional Metallogeny for bulletin, external papers, metallogenic map. - New project - Rossland volcanics for fieldwork report and continuing study.	- Continuing study of Sullivan and other deposits. - Metallogenic study of NTS 82 area. - Study of major gold camp and opportunity to pursue origin of new types of deposits.	TH
1d)	A. Panteleyev Quesnel gold belt for O.F. maps, fieldwork report and continuation towards summary paper.	Continuing study of gold occurrences and potential for new types of deposits.	AP

ANNUAL PLANS FOR SUBSECTIONS in 1987/88

MINERAL DEPOSITS AND REGIONAL MAPPING SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
1e)	G. E. Ray Hedley gold camp for O.F. maps north and south of mine, fieldwork report.	Continuing study of province's next major gold producer.	GR
1f)	D. G. MacIntyre Babine Range metallogeny for O.F. maps, mineral potential maps.	Mapping/metallogenic study	DMacI
1g)	New Project (MDA) (G. Nixon) Mafic and ultramafic rocks.	Metallogenetic study of basic and ultrabasic terranes as source areas for PGE, Ti, Cr, Ni, Co, Au etc. deposits.	GN
1h)	New Project (MDA) Skarn Mineral Potential study - expansion of G. Ray's Gold Skarn project.	Metallogenic study of Skarn environments as hosts for many metal deposits (W, Mo, Sn, Be, Fe, Cu, Co, etc. focus will be on Gold in Skarn.	
2)	UBC Support	Grants to fund economic geology research.	
B)	REGIONAL MAPPING		
1a)	Whitesail Project To publish a 1:50,000 scale geological map and Fieldwork report on the Chikamin Mountain (93E/6) map sheet by January 15, 1988.	Mapping will assist epithermal gold exploration in part of Tweedsmuir Park that is scheduled to become a recreational area.	LD



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MINERAL DEPOSITS AND REGIONAL MAPPING SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
1b)	Taseko Project To publish a 1:50,000 scale geological map and Fieldwork report on the Noaxe map sheet (930/2) by January 15, 1988.	Mapping will assist epithermal gold exploration in the area by better defining stratigraphic and structural controls to mineralization.	KG
1c)	Sicker Project To publish a 1:50,000 scale geological map and report on the Cowichan and Duncan map sheets (92C/16, 92B/13) by January 15, 1988.	Mapping will assist current exploration programs for polymetallic massive sulphide deposits of the Westmin type by better defining and delineating favourable Sicker Group stratigraphy.	NM
1d)	Midway Project To publish a 1:50,000 scale geological map and report on the Blue Dome map sheet (104P/12) by January 15, 1988.	Mapping will assist exploration for manto type silver and gold bearing deposits by defining favourable areas between the Midway deposit and the Cassiar camp.	JN
1e)	Babine Project To publish 1:50,000 scale geological maps and a Fieldwork report on the Driftwood (93L15) and Quick (93L/10) map sheets by January 15, 1988.	Mapping will assist active exploration in the area by helping to define stratigraphic and structural controls to mesothermal gold-silver veins such as those of the Dome Mountain camp.	DMacI

# ANNUAL PLANS FOR SUBSECTIONS in 1987/88

## MINERAL DEPOSITS AND REGIONAL MAPPING SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
1f)	Secretarial Support. To increase productivity by providing typing, expense tracking and data entry services for MDA supported Mineral Deposits and Regional Mapping programs.	Secretarial/expense tracking/data entry support is required for the efficient operation of the MDA metallogenic and regional mapping programs.	BMCM DMacI
1g)	Technical Support/Remote Sensing. To increase productivity by providing map compilation, draughting, data entry, and remote sensing image analysis support for the Regional Mapping program.	Support personnel are required to assist in compilation of data and other time consuming tasks so that project leaders can dedicated the majority of their time to geological analysis and map creation.	BMCM DMacI
1h)	Atlin Project (Proposed). To publish a 1:50,000 scale geological map and report on the Atlin area (104N/12) by January 15, 1988.	Mapping will assist current exploration in the area by defining stratigraphic and structural controls to lode and placer gold occurrences.	DMacI
1i)	Manson Creek Project (Proposed). To publish a 1:50,000 scale geological map and Fieldwork report on the Manson Creek area (93N/9).	Mapping will assist active gold exploration in the Manson Creek area by helping to define possible lode gold targets within an old placer camp. Geology of this important area is poorly known.	DMacI
1j)	Kokanee Project (Proposed). To publish a 1:50,000 scale map and Fieldwork report for the Kokanee park area (82F/14).	Mapping will help define the mineral resource potential of the Kokanee park proposal (82F/14).	DMacI

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EDITORIAL SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
1)	<p>Edit and publish Survey Branch annual publications:</p> <ul style="list-style-type: none"> <li>- Geological Fieldwork (Jan.)</li> <li>- Exploration Review (Jan.)</li> <li>- Exploration in B.C. (June)</li> <li>- Mining in B.C. (Sept.)</li> </ul>	Timely publication critical to Branch credibility with industry.	JN
2a)	<p>Complete editing and publish three Bulletins:</p> <ul style="list-style-type: none"> <li>- Kwong; Iron Mask Batholith</li> <li>- Hoy; Cottonbelt Area</li> <li>- Ray; Coquihalla District</li> </ul>	See above; Kwong Bulletin has already been in progress for over a year.	JN
2b)	<p>Complete editing and publish four Papers:</p> <ul style="list-style-type: none"> <li>- Schiarizza, Eagle Bay Fm.</li> <li>- Grant &amp; Rublee; Cr-Ni-Pt</li> <li>- Schroeter et al.; B.C. Discoveries</li> <li>- Mine Rescue Manual</li> </ul>	<p>See above; Schiarizza Paper has already been long delayed.</p> <p>Existing manual poorly organized and written. It sells internationally and reflects poorly on the Ministry.</p>	JN

# ANNUAL PLANS FOR SUBSECTIONS in 1987/88

## GEOCHEMISTRY SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
1)	<ul style="list-style-type: none"> <li>- From orientation surveys,</li> <li>- To produce a Geologic Fieldwork and/or Open File Report documenting the multi-element responses of regional geochemical methods with regard to geological, geochemical and environmental influences specific to the northern half of Vancouver Island.</li> </ul>	<p>To identify the criteria and factors that influence dispersion and have a bearing on the interpretation of the geochemical data.</p> <p>To define background and anomalous geochemical values.</p> <p>To define adequate prospecting methods utilizing the various available sample media and analytical techniques.</p> <p>To assess the effectiveness of regional geochemistry on Vancouver Island with regard to its usefulness in delineating regional geochemical patterns and providing baseline information on mineral potential.</p>	PM
2)	To complete Regional Geochemical Silt and Water Survey for NTS 104B and part of 104C and 104G, and NTS	<p>Survey will provide a comprehensive data set that will delineate regional geochemical patterns and will be used to provide baseline information for more detailed studies.</p> <p>Due to the lack of both regional and detailed geological mapping, the program will provide the first systematic assessment of the mineral potential of the area.</p> <p>The precious metal producers of the Stewart Gold Camp make this area an attractive exploration area.</p> <p>Recommended for sampling by the Geochemical Advisory Committee.</p>	PM/WMJ

ANNUAL PLANS FOR SUBSECTIONS in 1987/88

GEOCHEMISTRY SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
3)	To produce floppy diskette versions of data obtained from the 1985 and 1986 Regional Geochemical Survey Program.	To maintain a complete geochemical database publicly available in a convenient and computer accessible manner.	PM
4)	To initiate development of an in-house software system to produce Open File Reports of 1:250,000 elemental and interpretive compilation maps of previously released RGS data for which only sample locations and data listings were published (92J and 920).	To graphically display baseline geochemical data. To provide an immediate guide to, or indication of, mineralization and regional geological or geochemical trends.	PM
5)	Platinum Orientation Studies, co-operative Geological Survey Branch-UBC-Industry effort to investigate/develop exploration geochemical methods for the detection of PGE mineralization in a variety of environments.	Despite rapidly increasing interest in exploration for platinum deposits very little is known about the geochemical behaviour of the platinum group elements, particularly in the secondary environment. This study will provide guidelines to assist exploration companies optimize geochemical methods.	PM

# ANNUAL PLANS FOR SUBSECTIONS in 1987/88

## DISTRICT GEOLOGY SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
1)	<p>To develop and maintain a current knowledge of the geology, mineral deposits, and metallogeny of each district.</p> <ul style="list-style-type: none"> <li>- to inform and advise government, industry, and public, at any time, about geological aspects of properties or exploration and prospecting activities.</li> <li>- to give talks and publish internal or external papers dealing with the metallogeny and the exploration potential of each district and of the province in a timely manner.</li> <li>- to publish, within three years, a Metallogenic Map of B.C. to be revised every three years thereafter.</li> <li>- to recommend where research or mapping by the GSB or other agencies is needed.</li> <li>- to offer comments and recommendations with respect to the assignment of FAME grants.</li> <li>- to respond on an "as needed" basis to request for information and advice to the Land Use Subsection on Land Use issues.</li> </ul>	<p>To inform and assist the B.C. exploration community in the setting of exploration priorities and to encourage and inform other companies and individuals who are interested in becoming active in B.C.</p> <p>Also, to guide and assist academic organizations and government agencies, including the Geological Survey Branch, in the planning of research and mapping activities and the setting policy.</p>	DG's
2)	<p>To visit, examine, and publish descriptions of selected mineral properties, new and old.</p> <ul style="list-style-type: none"> <li>to publish maps and/or descriptions of all selected properties in Geologic Fieldwork or Exploration Part B.</li> <li>- to contribute to the updating of the data in MINFILE on an ongoing basis.</li> </ul>	<p>To contribute to the published geological data base of the province and to ensure that it is kept up-to-date in a timely manner.</p>	DG's

# ANNUAL PLANS FOR SUBSECTIONS in 1987/88

## DISTRICT GEOLOGY SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
3)	<p>To routinely monitor all exploration activity in each district.</p> <ul style="list-style-type: none"> <li>- to inform government and the public at any time about levels of activity and exploration trends.</li> <li>- to publish an annual Mineral Exploration Review for release in January of each year, with an updated version to be published later as Exploration, Part A each year.</li> <li>- to produce an annual update of the Producers and Potential Producers Map for release in January each year.</li> </ul>	<p>To enable the government and the public to be aware of levels of activity and exploration trends at all times and in all areas, as a necessary background to the establishment of policy and the allocation of exploration and development funds.</p>	DG's
4)	<p>To train prospectors at both the advanced and the basic level of instruction.</p> <ul style="list-style-type: none"> <li>- to stage an annual Mineral Exploration Course for Prospectors.</li> <li>- to provide the encouragement and resources necessary to enable other agencies and individuals, province-wide, to present basic level courses that meet our established standards.</li> </ul> <p>to teach or assist with the teaching of basic courses when and where needed, as long as such involvement does not interfere with the delivery of priorities 1), 2), and 3).</p>	<p>It is essential to the long term health of the provincial mineral industry and the provincial economy to maintain a competent community of properly trained and skilled prospectors.</p>	DG/GD VAP

ANNUAL PLANS FOR SUBSECTIONS in 1987/88

DISTRICT GEOLOGY SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
5)	<p>To effect the full and independent computerization of all district offices.</p> <ul style="list-style-type: none"> <li>- to provide each D.G. with a personal computer and preliminary software within the 87/88 fiscal year.</li> <li>- to carry out the necessary staff training and systems development to render all offices fully computerized within three years.</li> </ul>	Will enhance the operating efficiency of each district office by greatly streamlining the ability of the D.G. to gather, file, and manipulate data. As a consequence, the timeliness and quality of our publications will improve.	VAP
6)	<p>To contribute to the Mine Development Review Process by reviewing all submissions and offering comments on behalf of the Geological Survey Branch.</p> <ul style="list-style-type: none"> <li>- to draft Guidelines for Operators on the preparation of geological sections of mineral submissions.</li> </ul>	To assist and encourage the responsible development of new mines in the province.	DG's VAP
7)	Contract clerk-stenographer, Victoria office; full-time.	Essential to the efficient operation of the Victoria office and Section as a whole.	VAP
8)	Contract Assistant District Geologist in Smithers.	To assist the District Geologist in the busiest district by mapping selected mineral properties and camps and undertaking special studies.	VAP DL
9)	Contract prospector assistance and training officer, Victoria, full-time.	<p>To assist with the rating and selection of FAME prospector grantees.</p> <p>To help organize and deliver the annual Mineral Exploration Course for Prospectors and various basic level courses.</p> <p>To collect stock for the rock and mineral sets.</p>	VAP



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DISTRICT GEOLOGY SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
10)	Part-time rocks and mineral technician.	To prepare rock and mineral sets for about 3 months; essential to continuation of effective training programs.	VAP

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COAL SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
1)	<p><u>Coalfile:</u> The Branch is charged with collection of coal assessment reports. The management of these files in an efficient manner requires the maintenance of a manual and computer file on an ongoing basis.</p> <ul style="list-style-type: none"> <li>- Approval of geological content of assessment reports. Reports approved or rejected within 60 days of receipt.</li> <li>- Participation in Coal Mines Review Committee activities provide geologic input into the Coal Mine Approval process. Ongoing as requested by industry.</li> <li>- Investigate no-cost microfilming of Coal file hardcopy.</li> </ul>	<p>The information in the coal assessment reports represent the most complete record of coal quality and occurrences in the province. The utilization of this information is essential to understand the coal resources of the province.</p> <p>This approval is essential for the maintenance of coal licences under the Coal Act.</p> <p>Subsection analysis of the proposed project will reveal the adequacy of knowledge of the coal deposit.</p> <p>Microfilm copies will provide greater access to coal information plus security of data from loss.</p>	<p>WK/AM CK JK</p>
2)	<p><u>NWBC Coal Basins:</u> Production of two bulletins on the Mt. Klappan and Telkwa areas. Development of successor basin coal depositional model. Drafts by fiscal year end.</p>	<p>This study encompasses two high potential producers of non-metallurgical coal. They provide an opportunity to diversify B.C.'s coal products.</p>	<p>JK</p>

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COAL SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
3)	Kinuseo 1:50 000 mapping project. Produce two 1:50 000 map sheets covering future producing areas in the NE Coalfield, Quintette and Monkman. Maps produced yearly.	All new expansion at the Quintette operation will occur in these map sheets and the potential pit areas of the Monkman property are also contained in the area.	WK
4)	<u>B.C. Coal Quality Catalogue.</u> A single publication outlining B.C. coal by quality, quantity, seam property. Will be assembled from existing information and fill-in sampling. 3 - 4 year timeframe and subsequently maintained. Paper on prospective deposits amenable for Ontario Hydro use, three months June 1987.	Need for a concise breakdown of the B.C.'s coal resources by quality to enhance the promotion of these resources to domestic and foreign customers.	ES/AM
5)	<u>Vancouver Island Coal Survey:</u> Compile and analyse all existing data for the Comox and Nanaimo Coalfields. One year compilation 3 - 4 years complete analysis of data with fieldwork.	Very keen interest in the coals of Vancouver Island for coal-seam gas, coal/water fuels and near tide water thermal export.	CK
6)	<u>Tertiary Basin Reconnaissance and Detailed Sampling:</u> A reconnaissance survey of the Princeton, Merritt and Hat Creek deposits to certain style and potential of future investigation. Will include detailed sampling wherever feasible.	These deposits are near existing infrastructure and potential markets. Detailed study of qualities of this coal is essential to inventory of this resource and promote its potential for existing and future marketable products.	WK/DG

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COAL SUBSECTION

Priority	Plan Statement	Importance of Results	Resp.
7)	<p><u>Detailed Deposit Analysis and Pit Assessment:</u>  Program to examine through computer based methods the major deposits of the province on a priority basis. Scale of study will range from property wide to detailed pit studies. Develop expertise in assessing deposit geological viability and provincial resource base.</p>	<p>The government is required on an increasing basis to aid financially in new projects. We often do not have the ability to adequately assess the available data let alone the time. This project will provide the means to stay a step ahead of evaluation requests as well as identifying significant features of a deposit.</p>	BW/WK
8)	<p><u>Coal Quality and Utilization Program</u>  To provide detailed quality analysis of the province's coal resources and potential new technologies applicable to its marketability.</p>	<p>We must gain expertise in the knowledge of B.C. coal quality and its potential uses (i.e. what coals can go to Ontario Hydro. How do we blend them? What coals and where are the best for coal/water. Branch will have ability to assess recovery projections for new project.</p>	ES
9)	<p><u>Secretary/Office Assistant</u>  A full-time support person for Coal Subsection. Provide stenographic, research and general office assistance. With the addition of two professionals additional assistance is essential.</p>	<p>Person will assist with report preparation, data entry and word processing.</p>	WK/VAP

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COAL SUBSECTION

Priority	Plan Statement	Importance of Results Resp.
MDA  10)	Northern Elk Valley 1:10 000 mapping. Complete mapping of the Northern Elk Valley. Information will be joined with Southern Elk Valley maps and a Elk Valley bulletin prepared. Interim Fieldwork articles and bulletin 1988/89.	The map area contains significant untapped coal resources where quality and distribution are inadequately understood. The identification of a range of coal qualities would provide alternative products to take advantage of shifting market requirements. DG
11)	<u>Gething Coal Trends</u> Develop a depositional environment model for the Gething coals of NEBC. Model will have predictive capabilities as to seam development and quality. Fieldwork paper 1988, Government paper series.	The Gething contains significant coals which have been intensely explored (Sukunka, Burnt River). Potential pit areas of this coal are presently being outlined by Quintette. The Gething is reasonably understood north of Bullmoose Creek, but its character within the presently producing areas has received less attention. AL

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RESOURCE DATA & ANALYSIS SECTION  
ASSESSMENT REPORT PLAN

Priority	Plan Statement	Importance of Results	Resp.
1.1)	To approve & process assessment reports within 60 days of receipt (approximatley 100 reports/month) - includes receipt/tracking/checking/approval/rejection correspondence/data entry/plotting/PAC accounting. - to publish Assessment Report Index and maps annually (Dec./87) - to serve client requests on demand.	Essential for exploration industry to have timely approval of assessment reports as mineral claim tenure extensions dependent on these approvals. Widespread industry usage of these reports is dependent on published Index and Maps and on demand photocopy service.	TK LdG
1.2)	To release microfilmed Assessment Reports (jackets) to distribution agent at the end of each month as the confidentiality period expires. This includes document preparation, filming & fiche distribution to 28 government offices.	Essential for industry to have widespread access to fiche reports for free viewing or low-cost purchase.	TK LdG
2.1)	To deliver Exploration '87 Part C manuscript to editor by March 18, 1988. - includes in-house editing by staff.	A major annual publication that summarizes the results of industry's exploration programs. This publication is mainly used by industry to plan further exploration.	TK LdG
3.1)	To redesign the Assessment Report computer system by Sept. 30/87 *with system testing completed by Nov. 30/87*.	Essential to achieve streamlined automated production of Exploration Volumes, Index, Maps, PAC accounts, correspondence and links to other databases.	TK LdG

\*Subject to review when project scope document and system design completed.

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RESOURCE DATA & ANALYSIS SECTION  
ASSESSMENT REPORT PLAN

Priority	Plan Statement	Importance of Results	Resp.
4.1)	To review Mineral Act Regulations and prepare report with recommendations for amendments.	Necessary to amend Regulations to streamline reporting and approval procedures to achieve a quality database with minimum administrative effort.	TK CS

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RESOURCE DATA & ANALYSIS SECTION  
MINFILE PLAN

Priority	Plan Statement	Importance of Results	Resp.
1.1)	MINFILE - implementation of production to serve external clients by June 1/87 and routine, operation and maintenance throughout year. - includes special study on mineral occurrences and potential of Purcell Wilderness by Aug/87.	Essential to have routine production of standard and custom output products available to Ministry and industry end users for research and planning purposes.	AW CB BG
2.1)	MINFILE - to achieve 75% completion of coding all B.C. occurrences by March 31, 1988. - includes data entry and editing - includes preparation of 2 open file commodity reports on barite and sulphur by March 31, 1987.	Essential to achieve high level of completeness of the data base to maximize the usefulness to end users.	AW CB BG
3.1)	MINFILE - development of micro-computer search system software by July 1/87*	Essential to develop a retrieval system that end users can use independently and at low cost.	AW
3.2)	MINFILE - development of Phase I Graphics System by March 31/88.	Essential to have capability to produce mineral occurrence maps using computer automation.	AW

\* Subject to progress review mid-May



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RESOURCE DATA & ANALYSIS SECTION  
LAND USE PLAN

Priority	Plan Statement	Importance of Results	Resp.
1	<p>Publish Chilko Lake Mineral Potential Study within Fiscal 87/88.</p> <p>June 1: Geology map to drafting July 1: Geological manuscript complete Aug. 1: Geochemical manuscript complete Sept. 1: Mineral Potential manuscript complete; entire text to editor; Mineral Potential map to drafting.</p>	<p>To stimulate and guide industry exploration to areas of high mineral potential.</p> <p>To develop a standard methodology for field evaluation of large areas proposed for alienation; to develop a model interpretive mineral potential map.</p> <p>To guide inter-ministry land use planning of the area and to illustrate the need for mineral potential surveys.</p>	GMCL
2)	<p>Land Use Coordination Office Operation 87/88.</p>	<p>To maximize the land base available for exploration and development in the province through pro-active policy development.</p> <p>To continue to respond to Wilderness Advisory Committee Study Areas.</p> <p>To implement the Exploration in Recreation Areas agreement.</p> <p>To computerize records management and data processing.</p>	AR

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## RESOURCE DATA & ANALYSIS SECTION INDUSTRIAL MINERALS PLAN

Priority	Plan Statement	Importance of Results	Resp.
1)	Supervision, routine operations and technical support for whole industrial minerals program. Monitoring and advising industry on exploration and development activities. Generation of proposals for new projects.	To ensure the timely completion of 6 MDA and 6 'A' Base projects through publications; to assist industry in identifying development opportunities.	DH
2.1)	To assess economic potential of carbonatites and kimberlite related diatreme.	To attract the Mining Industry to new commodities: REE, niobium, zircon, igneous phosphates; diamonds.	JP
2.2)	Petrology of the Golden group of kimberlite diatremes.	A supplement for 2.1.	OI
2.3)	To assess the remote sensing application in prospecting for carbonatites in B.C. Rocky Mtns.	A supplement for 2.1	UM
3)	Assessment of phosphate resource in B.C.	In view of diminishing reserves of traditional suppliers (Florida), a local source is evaluated for the Western Canada fertilizers industry.	SB
4)	To assess the dimension stone potential of the long abandoned quarries.	A new industry development, a potential export and import replacement.	GW/DH
5)	To assess the B.C. olivine source for foundry and blasting sand.	Import replacement.	GW/DH

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RESOURCE DATA & ANALYSIS SECTION  
INDUSTRIAL MINERALS PLAN

Priority	Plan Statement	Importance of Results	Resp.
6)	Assessment of industrial minerals potential of Tertiary basins-clay, zeolites, etc.	Development of new commodities- fireclay kaolin, bentonite, zeolites. Some are presently imported, others are potentially exportable.	PR
7)	Assessment of kyanite and garnet abrasives in B.C.	A new commodity development, export promotion and import replacement.	JP
8)	Peat inventory	Imported commodity and exportable product.	DM
9)	Evaluation of feldspar resources in B.C. for glass and ceramic applications.	A new commodity development, a potential import replacement.	GW
10)	Talc O.F.	To compile the database on talc in B.C. - potential replacement of imported commodity.	VRH
11)	Magnetite O.F.	To compile the database on a heavy media suspension product for coal processing - used locally and potential export commodity.	VRH
12)	B.C. Industrial Minerals Deposit Map.	To publish map showing the distribution of deposits and occurrences with favourable areas for industrial minerals in B.C. It will be used by both the industry and government for program planning.	DH/SB GW/VRH

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RESOURCE DATA & ANALYSIS SECTION  
INDUSTRIAL MINERALS PLAN

Priority	Plan Statement	Importance of Results	Resp.
13)	Property examinations - mapping, sampling, laboratory studies.	Building the data base to attract the industry interest for exploration and development of new industrial minerals deposits.	DH/GW

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ANALYTICAL SCIENCES

Priority	Plan Statement	Importance of Results	Resp.
1)	Ongoing - Complete analytical workload up to published capability. Consolidation of XRF system for major and trace elements. Develop and implement AAS methods for Hg, As, Sb, Te. Evaluate XRF method for REE.	Support Geological Survey Branch mission with timely and accurate output of data.	LAB STAFF
2)	Ongoing - Institute quarterly safety inspections by lab group.	Further ensure safety of lab personnel.	MC WMJ
3)	Ongoing - Administer lab, RGS and exam for assayers.	Management and MEMPR Act requirement.	WMJ
4)	Ongoing - Pre and post analytical briefing between analysts and geologists.	Improve utility of data and minimize interpretation problems.	WMJ
5)	March/87 - Plan, document and carry out training and work sharing.	Limit lab vulnerability by increasing staff and equipment flexibility.	LAB STAFF
6)	June/87 - Design lab management and sample flow system (start up only).	Increase productivity by minimizing routine clerical functions for analysts, geologists and management.	WMJ JK
7)	Purchase of new AAS (July/87).	To improve lab productivity by replacing two unreliable instruments (14 & 11 years old).	MC/BB

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ANALYTICAL SCIENCES

Priority	Plan Statement	Importance of Results	Resp.
8)	Lab technician assistance (April/87).	Improved turnaround during peak load period, assist with method development for new request, etc.	WMJ
9)	Provide for instrument maintenance (ongoing).	To improve instrument reliability and minimize down time.	WMJ

ANNUAL PLANS FOR SUBSECTIONS in 1987/88

VANCOUVER

Priority	Plan Statement	Importance of Results	Resp.
1)	To ensure effective communication, consultation, and liaison between Geological Survey Branch in Victoria and senior industry, government and university officials in Vancouver.	Essential in role as liaison officer to stimulate and promote the growth of the mining industry.	TS
2)	To assist in assessing exploration trends and concepts in the Province by conducting field studies and attending meetings. In 1987 selected major gold prospects in B.C. will be examined.	Document geologic setting, styles, ages and other scientific data pertaining to mineral deposits.	TS
2a)	To publish a major article (internal publication?) on Gold in B.C. to accompany Prel Map No. 64, Gold in B.C. by July 1, 1988.	Essential to exploration companies and Government agencies working in B.C. or planning to invest eg. from Pacific Rim.	TS
3)	Present talks, papers, poster sessions, and promote exploration and development opportunities in B.C. at symposiums and Trade Missions - particularly out-of-province, eg. Sparks, Nevada Apr. 2-11/87.	a) Encourage interest and investment in B.C. b) Improve professional training to pass on to colleagues and industry.	TS
4)	To establish and manage an effective Geological Survey Branch office in Vancouver including sale of publications, upkeep of library and other information services.	Essential to exploration industry and other Government agencies. Essential to inquiries from abroad, esp. from Pacific Rim.	TS/CL
5)	To publish a map and tabulation showing Documentation of Mineral Discoveries in B.C.: 1965 to Present - by July 1, 1987.	Document facts on history, current and future exploration trends in B.C. Promote variety, importance and future of B.C. minerals.	TS

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VANCOUVER

Priority	Plan Statement	Importance of Results	Resp.
6)	To assist in the evaluation of F.A.M.E. applications as a member of the F.A.M.E. Management Committee.	Provide consistent input on applicants and conduct field visits and other enquiries.	TS
7)	To assist with the Prospector's Assistance Program.	Essential to train prospectors, keep in touch, maintain files and encourage dialogue.	TS
8)	To review current prospect uses and Stage I and Stage II reports, as an advisor to the Mine Development Steering Committee.	Interaction with Mineral Policy and Industry.	TS
9)	To review and recommend revisions to Mineral Act as a member of working committee.	Improve and streamline for mutual benefit of Industry and Government.	TS
10)	To provide MINFILE updates as required.	Essential to update MINFILE data base for Industry and Government use.	TS
11)	Become computer literate and apply to needs of Vancouver office.	Streamline data entry and retrieval of vital information to Industry and other Government agencies. TS	



F.A.M.E.

Priority	Plan Statement	Importance of Results	Resp.
1)	Maintain and apply objective selection criteria to incoming FAME applications.	To ensure fair allocation of grant funds.	JG
2)	Ensure a rapid evaluation process for applications.	To enable grantees to plan their field programs.	JG
3)	Maintain an efficient filing system and data base.	To provide information within the Ministry on a full and timely basis.	JG
4)	Distribute information about properties to District Geologists, Project Geologists, and other interested parties.	To enhance knowledge of British Columbia mineral deposits.	JG
5)	Prepare reports for Treasury Board and FAME Management Committee.	To ensure appropriate authorities are fully informed on progress.	JG
6)	Promote contacts and liaison with industry and industry associations.	To ensure FAME program is meeting the needs of the industry.	JG

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EXECUTIVE STAFF

Priority	Plan Statement	Importance of Results	Resp.
1)	To provide overall direction to Branch.	Ensures Branch knows where it wants to go and how to get there.	WRS
2)	To monitor and control budgets.	Ensures appropriate allocation of funds within guidelines set up by the Ministry of Finance.	WRS/CS
3)	To publicize Branch programs and achievements in published papers, attendance at meetings conferences, speeches, etc.	Essential to keep the mining industry informed of Branch programs to aid and stimulate exploration.	WRS
4)	To foster consultation with industry and academia as represented by the Technical Liaison Committee, to ensure programs are relevant and timely.	Ensures programs are relevant.	WRS
5)	To ensure effective communication with other Directors in the Division and with Senior Ministry staff.	Fosters co-operation, eliminates duplication.	WRS
6)	To ensure adequate funding for Branch activities.	To provide level of service required by industry.	WRS
7)	To ensure morale in the Branch remains high and the Branch is a good place in which to work.	Will keep productivity levels high.	WRS
8)	To assign staff and resources as required to meet Branch objectives.	Essential to most effectively meet deadlines and produce quality products.	WRS
9)	To ensure Branch projects and assignments are delivered on time, on budget, and to high standard.	Critical to maintain Branch credibility with industry and other government agencies.	WRS

**ANNUAL PLANS FOR SUBSECTIONS in 1987/88**

**EXECUTIVE STAFF**

Priority	Plan Statement	Importance of Results	Resp.
10)	To acquire microcomputers for all district geologists in 87/88.	Will enhance productivity of district offices.	WRS
11)	To accelerate the computerization of the Branch with respect to data management and scientific computer applications.	Will enhance productivity and efficiency of Branch.	WRS
12)	To complete the Performance Planning Evaluation and cycle with all Managers in the Branch and to institute the process in the sections.	Good management on all levels essential to completing all above plans.	WRS