



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

**GEOLOGICAL SURVEY BRANCH  
1988-1989 PROJECT INVENTORY**

**Victoria 1988**

## PREFACE

This inventory of the major projects the Geological Survey Branch will undertake in Fiscal 1988-89 is primarily designed to inform the exploration industry and interested public of the location and objectives of our 1988 field projects. Project leaders are available for consultation both during and after the field season.

This is the most extensive field program undertaken in the history of the Branch. It is made possible by recent significant increases in the base budget; \$1.5 million in 1988-89 and \$2.0 million in 1987-88, for a total base budget of \$6.67 million this year.

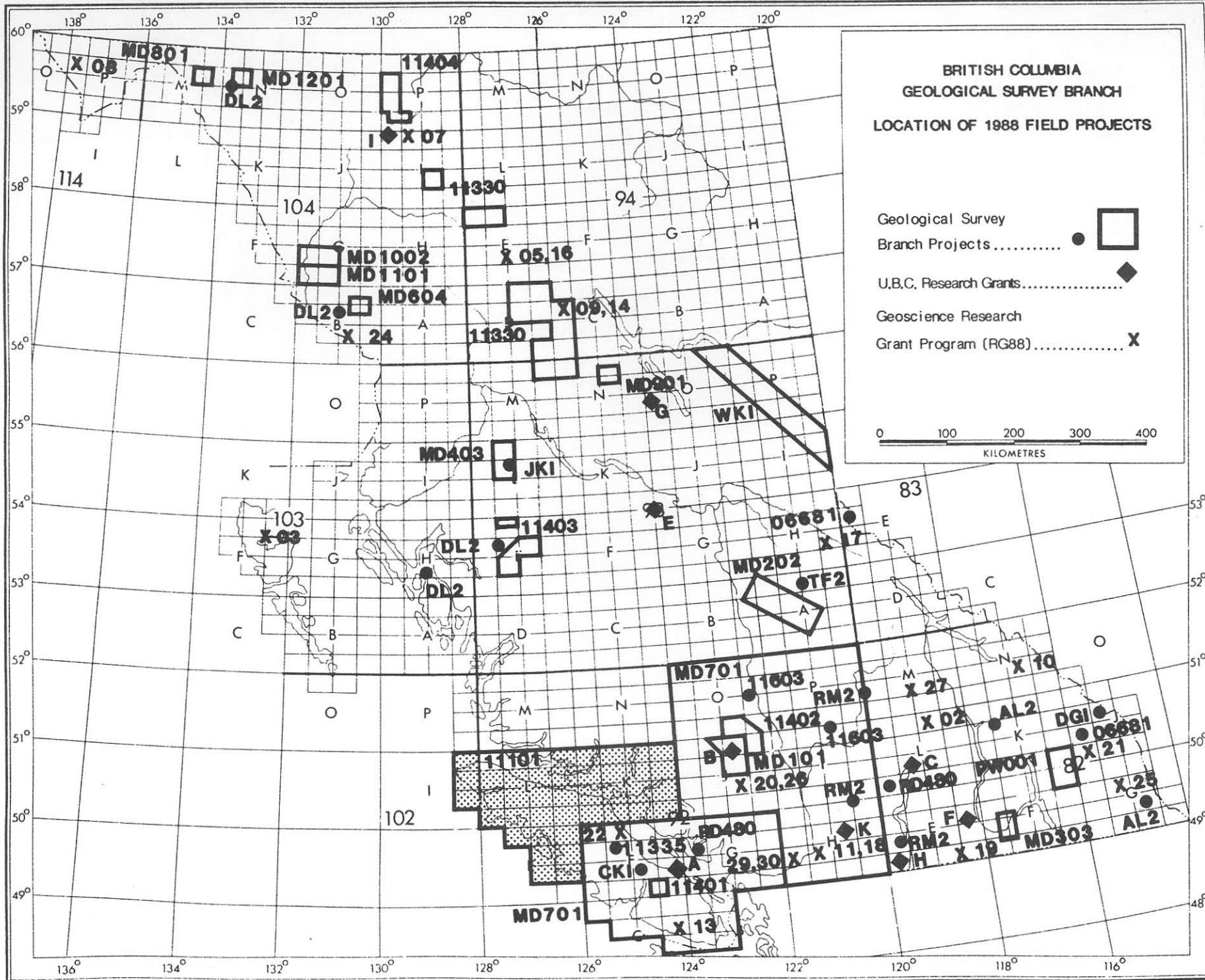
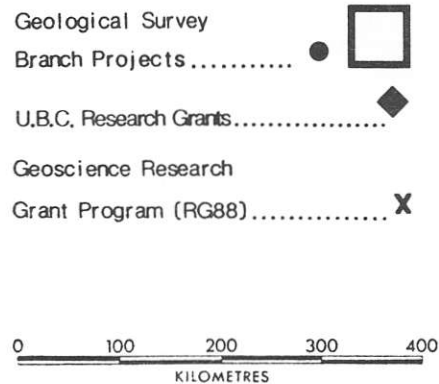
In addition the Branch has been allocated \$1.6 million from the Canada/British Columbia Mineral Development Agreement (MDA) for geoscience programs in 1988. Projects funded by the MDA are identified by an (M) in the text.

The major new initiative of the Branch is in 1:50 000 scale regional mapping projects. Maps at this scale have been identified by industry as the fundamental underpinning for exploration work, yet only 5% of British Columbia has been mapped at this or larger scales. Three new mapping projects will be initiated in 1988 in the poorly known, frontier areas in the northwest of the province. These new programs, together with six regional mapping projects and metallogenic industrial mineral and coal already in progress, will be a valuable stimulus and guide to mineral exploration in these areas.

Comments, suggestions, and queries regarding the Branch's geoscience program are welcome.

W.R. Smyth  
Chief Geologist

BRITISH COLUMBIA  
 GEOLOGICAL SURVEY BRANCH  
 LOCATION OF 1988 FIELD PROJECTS



GEOLOGICAL SURVEY BRANCH  
PROJECT INVENTORY

Year: 1988-89  
Section: Mineral Deposits and Regional Mapping  
Category: Mineral Deposits and Metallogenic Mapping

Project No.	Principal Researcher	Project Title	Project Statement	Area	No. of Days Fieldwork	\$ Budget M = MDA A = 'A' Base
MD101	B.N. Church	Geology and Mineralization in the Bridge River Mining Camp  Year 3 of 4	The Bridge River Mining Camp remains foremost in gold production in British Columbia. The purpose of the current project is to re-evaluate the geological setting of the numerous mineral deposits of the camp in the light of new mining exploration activity. In 1988 approximately 500 sq. km. of mapping principally in the Bralorne - Bridge River and Birkenhead sheets will proceed together with property examinations in these areas.	Bridge River Area  92J/15 92J/10	90	\$ 81,700 (A)
MD202	A. Panteleyev D.G. Bailey	Quesnel Mineral Belt, Geologic Mapping and Mineral Potential  Year 3 of 4	Regional geologic mapping and investigation of gold and copper-gold mineralization is being conducted in Triassic and Jurassic island arc rocks of the Quesnel terrane. In the central volcanic axis mineralization is related to coeval alkalic stocks; in the underlying and flanking clastic rocks, gold occurs in quartz veins in structurally complex black phyllites. Mapping will extend the area covered in 1986 and 1987 along the volcanic arc axis northwesterly toward Quesnel (Bailey), and southeasterly towards the Quesnel-Cariboo terrane boundary (Panteleyev).	Quesnel River and Horsefly Lake  93A/93B	50	\$ 85 000 (A)
MD303	T. Høy K. Andrew	Mineral Deposits in Rosslund Volcanic Rocks	Study of the setting and origin of the Triassic-Jurassic Rosslund volcanic and	Nelson	90	\$ 94 700 (A)

		Year 2 of 4	sedimentary rocks in southeastern British Columbia which contain vein/skarn/intrusive gold deposits. This project will concentrate on the setting and origin of the volcanic rocks and the controls and distribution of related precious metal deposits.	82F		
G1409 MD402	D.G. Macintyre P. Desjardins	Telkwa Range  Year 2 of 2 - project expanding	A renewed interest in precious metal-bearing veins in the Babine and Telkwa Ranges and the general lack of detailed geologic maps for these areas is the main impetus for this project. Two 1:50 000 map sheets (93L/11,14) will be completed in 1988. The area to be covered includes important mineral deposits on Hudson's Bay Mountain and similar occurrences to the south in the Telkwa Range. The mapping will assist in the interpretation of structural and stratigraphic controls to mineralization and the interpretation of regional geochemical data.	Telkwa Range/ Hudson's Bay Mtn.  93L/14,11	90	\$112 000 (A)
MD503	G.E. Ray	Hedley Gold Project  Year 4 of 4	The Hedley gold-skarn district is the most important gold producing area in the province with the recent reopening of the Nickel Plate Mine by Mascot Gold Mines Ltd. The previous 3 field seasons has resulted in mapping a 525 sq. km. area around Hedley, as well as a 200 sq. km. area further north around Pennask Mountain. In addition, studies have been completed on the geochemistry and geological controls of the gold deposits, as well as geochronology, microfossil and electron microprobe studies. The 1988-1989 season will be office based compiling the data, drafting the 1:25 000 geological map and writing up a Bulletin on the geology and gold deposits of the Hedley area.	82E/5	0	\$ 19 000 (A)
MD604	D.J. Alldrick J.M. Britton	Iskut-Sulphurets Project	The Iskut-Sulphurets district in the southern Boundary Ranges has been the focus	Boundary Ranges,	65	\$150 000 (A)

	I.C.L. Webster	Year 2 of 4	of intensive exploration efforts for the past 7 years. Many new gold and silver discoveries have been reported and pre-production development work is underway at four properties, with production scheduled to start in 1988-89. This 4-year project will produce three 1:50 000 geological maps of the entire district, accurately locating the many new deposits and several extensive gossan zones in the region. Detailed studies will determine the geological controls for mineral deposits to assist ongoing exploration efforts.	Coast Mtns.  104B		
11330	G.T. Nixon	Ultramafic Project  Year 2 of 2	Ultramafic and mafic igneous rocks are potential hosts to PGE, Cr, Ni, Co, asbestos and jade deposits and are spatially related to gold deposits. Stage 2 of this project in 1988 will examine the PGE potential of Alaskan-type ultramafic complexes in central (Omineca Mtns.) and northern (Dease Lake area) B.C.	Various	75	\$150 000 (M)
	J.M. Moore	Lithoprobe	The Thompson Plateau project involves detailed and reconnaissance mapping as well as map compilation along an east-west corridor that follows the proposed lithoprobe transect west of Vernon in southeastern British Columbia. Emphasis will be placed on the stratigraphic relationships, structural geology and the setting of mineral deposits.	82L, 92I		\$ 25,000 (A)

bearing deposits in B.C. A paper entitled "Gold in British Columbia: Update '88" is in preparation. In this connection field visits will be made to active gold camps including: Iskut, Sulphurets, Trophy, Galore, Premier,, Cinola, Toodoggone, Howell Creek, Brett, Vault, Capoose-Nazko area and Kleena Kleene area.

GEOLOGICAL SURVEY BRANCH  
PROJECT INVENTORY

Year: 1988-89  
Section: Mineral Deposits and Regional Mapping  
Category: Regional 1:50 000 Mapping

Project No.	Principal Researcher	Project Title	Project Statement	Area	No. of Days Fieldwork	\$ Budget M = MDA A = 'A' Base
11401	N. Massey	Sicker Project  Year 3 of 4	The band of predominantly volcanic rocks stretching from Port Alberni to Duncan has a very high potential for mineral deposits including gold-bearing polymetallic massive sulphides and gold-bearing quartz-carbonate veins in shear zones. This project will provide regional 1:50 000 mapping, elucidate the stratigraphy of the Sicker Group and provide a framework and metallogenic model for undertaking exploration for mineral deposits. The 1988 field season will be centred in the Port Alberni - Nanaimo Lakes area.	Port Alberni-Nanaimo Lakes  92F/1W, 2E	90	\$150 000 (M)
11402	P. Schiarrizza	Taseko-Bridge River Project  Year 3 of 5	The Taseko-Bridge River regional mapping project will continue south and southeast of the Noaxe Creek map sheet, completed in 1987, onto the 92J/16 map sheets. The area covered includes known precious metal and base metal occurrences and deposits in both epithermal, mesothermal and porphyry settings. The aims of this project are to provide a regional geological framework suitable for future mineral exploration, and to identify and to map the limits of mineralization, hydrothermal alteration and associated geological features.	Noaxe  92J/15 92J/16	100	\$160,000(M)
11403	L. Diakow	Whitesail Project	Quartz veins containing precious metals	Chikamin	100	\$150 000 (M)



		Year 3 of 5	occur within metamorphosed plutonic and volcanic rocks of the pre-Jurassic Gamsby Group near Lindquist Peak, central Chikamin Mountain map sheet (93E/6). Similar strata underlying the southwest half of the Chikamin map area will be the initial focus of the regional mapping program in 1988. The second part of the 1988 program will expand published 1:50 000-scale mapping from the Sibola Range northward into the north half of Newcombe Lake map sheet (93E/14). The Sibola Range in the south half of the Newcombe area includes several known Cu-Mo porphyry deposits and polymetallic vein occurrences.	Mtn., Newcombe Lake  93E/6, 14		
11404	J. Nelson	Midway-Cassiar Project  Year 3 of 5	The area extending from Rancheria in the Yukon to Cassiar hosts a variety of precious metal exploration targets, particularly carbonate-hosted silver-lead-zinc mantos such as Midway, and gold quartz veins like those at Erickson within the Sylvester allochthon. Mapping in 1988 will cover the Cassiar map sheet and part of the Needlepoint Mountain sheet; this includes the Cassiar-Erickson mining camp. Detailed structural mapping completed in the Sylvester allochthon during 1986 and 1987, will be extended into the camp.	McDane  104P/4,5	100	\$160 000 (M)
MD403	D.G. MacIntyre P. Desjardins	Telkwa Range  Year 2 of 2 - project expanding	A renewed interest in precious metal-bearing veins in the Babine and Telkwa Ranges and the general lack of detailed geologic maps for these areas is the main impetus for this project. Two 1:50 000 map sheets (93L/11,14) will be completed in 1988. The area to be covered includes important mineral deposits on Hudson's Bay Mountain and similar occur-	Telkwa Range/ Hudson's Bay Mtn.  93L/14,11	90	\$112 000 (A)

rences to the south in the Telkwa Range. The mapping will assist in the interpretation of structural and stratigraphic controls to mineralization and the interpretation of regional geochemical data.

MD801	M. Mihalynuk	Tagish Year 2 of 4	The Tagish area is tectonically complex and poorly mapped, yet it has high precious metal potential. Past gold producers such as the Engineer and Polaris Taku mines are along structural trend to the south. The program, initiated in 1987, documented geochemical gold anomalies in 104M/15 and will continue to the south, with mapping concentrating on 104M/9W and 104M/10E in 1988, and 104M/8, 104M/1E and 104N/4W in future years.	Tagish 104M/9W, 10E	100	\$150 000 (A)
MD901	F. Ferri	Manson Creek Year 2 of 4	The Manson Creek area is underlain by an important belt of Paleozoic to Triassic volcanic and carbonate rocks that host precious and base metal deposits. The project, in its second year, involves the mapping of the south half of the Germansen Landing sheet and the north half of the Germansen Lake sheet (93N/15S and 93N/10N).	Manson Creek 93N/15S, 10N	90	\$116 000 (A)
MD1002	D. Brown	Stikine Year 1 of 4	The 4-year mapping project is designed to better define stratigraphy and structure of Paleozoic Asitka/Stikine assemblage (host of Muddy Lake deposit) and Mesozoic volcano-sedimentary sequences (Galore Creek deposit) in the region. Metallogenic models will be formulated to encourage mineral exploration. The nature of the Coast-Intermontane Belt contact will also be explored. In the first year a 1:50 000 Open File geological map of 104G/5E and 6W will be published.	Telegraph Creek 104G/5E, 6W	85	\$170 000 (A)

MD1101	J. Logan	Telegraph	<p>The Telegraph map area contains gold and silver-enriched alkalic and calcalkalic porphyry copper deposits. Precious metal vein systems occur in regional structures peripheral to these intrusions and are disposed along the Intermontane-Coast Belt contact. Regional mapping at 1:50 000 scale in the Sphaler Creek and Flood Glacier map sheets will focus on outlining potential gold mineralized environments and updating the geological database.</p>	<p>Telegraph Creek  104G/3,4</p>	85	\$170 000 (A)
		Year 1 of 4				
MD1201	C. Rees M. Bloodgood	Atlin	<p>A new project is being initiated in the Atlin area to examine the Paleozoic Cache Creek Group and associated gold mineralization. Geologic mapping of the area east of Atlin will document lithologies, stratigraphy and structural geology within the Cache Creek Group and focus upon characterizing the gold mineralization within the Atlin terrane. This work will assist mineral exploration by defining structural and stratigraphic setting of known mineral occurrences and generating metallogenic models based upon field observations, petrographic studies and laboratory research.</p>	<p>Atlin  104N/11W 104N/12E</p>	80	\$165 000 (A)
		Year 1 of 4				

GEOLOGICAL SURVEY BRANCH  
PROJECT INVENTORY

Year: 1988-89  
Section: District Geology and Coal Resources  
Category: Mineral Deposits and Metallogenic Mapping

Project No.	Principal Researcher	Project Title	Project Statement	Area	Days Fieldwork	M = MDA A = 'A' Base
PW2	H.P. Wilton	Gold Metallogeny, Vancouver Island  Ongoing	An ongoing investigation of gold metallogeny on and around Vancouver Island, with special emphasis on the distribution, origin and significance of quartz-ferrocarbonate alteration zones. Known and reported alteration zones on Vancouver Island, Texada Island and Queen Charlotte Islands will be examined, sampled and described.	Vancouver Island	130	\$ 49 000 (A)
11335	Richard Dahl Carleton University	Mount Washington Mineral Deposits  Year 1 of 1	To fund and supervise a post doctoral research study of the geological setting, structure, mineralogy zoning and age relationships of epithermal mineral deposits currently being explored at Mount Washington, Gem Lake, Faith Lake, Piggot Creek and Wolf Lake.	Mt. Washington	60	\$ 10000 (M)
RM2	R.E. Meyers	Metallogeny of Lode Gold Deposits in South-central B.C.  Ongoing	An ongoing study of mesothermal and epithermal gold systems occurring in Carboniferous, Permian, Upper Triassic and Tertiary volcano-sedimentary sequences. The study will consider the stratigraphic, alteration and structural settings of these deposits and provide descriptions thereof.	Okanagan-Bonaparte regions	90	\$ 33 750 (A)
DL2	D.V. Lefebure	Metallogeny of North-western B.C.  Ongoing	An ongoing project to describe and better understand selected mineral deposits in northwestern B.C. In 1988 research will focus on Bronson Creek, Nechako Plateau and Hecate Lowland. Initial research on volcano-genic massive sulphide deposits will also be	North-western B.C.	205	\$ 73 000 (A)

carried out.

TF2	E.L. Faulkner	Metallogenic Studies, Central B.C.  Ongoing	Detailed studies of 12 to 15 active mineral properties in the Central District and reports thereof in Exploration 1988, Part B. Establishment of a computerized mineral database for the district. Completion of field examination of all known and reported occurrences of platinum group elements in the district, verification of existence of platinum and possible identification of source rocks.	Central B.C.	35	\$ 11 000 (A)
AL2	A. Legun	Flathead Syenite Intrusions  Year 1 of 2	A mapping and sampling program aimed at mapping and describing the syenite intrusions and associated gold mineralization in the area. In particular the age, petrology and alteration of the syenites and the setting and type of the gold mineralization will be studied and described.	Howell and Harvey Creeks	15	\$ 12 500 (M)

GEOLOGICAL SURVEY BRANCH  
PROJECT INVENTORY

Year: 1988-89  
Section: District Geology and Coal Resources  
Category: Coal Studies

Project No.	Principal Researcher	Project Title	Project Statement	Area	No. of Days Fieldwork	\$ Budget M = MDA A = 'A' Base
DG1	D.A. Grieve	Elk Valley Coalfield  Year 4 of 4	Complete project by producing a synthesis of previous work by author into a bulletin on the Elk Valley coalfield.	Upper Elk Valley	Nil	\$ 1 500 (A)
WK1	A. Legun	Coal Trends in the Gething Formation  Year 2 of 2	Complete study of the coal potential of the Gething Formation in northeastern B.C. Work will concentrate on the production of a paper.	Peace River Coalfield	Nil	\$ 4 500 (M)
	W. Kilby	Coal Reflectance Studies, Northeastern B.C.  Year 3 of 3	Produce a synthesis of previous work by the author on coal reflectance in northeastern B.C. A Bulletin will be produced describing the rank distribution, effect of tectonics on reflectance, new reflectance analysis techniques and uses of reflectance information in coal exploration. Minor field sampling will be conducted to examine elevated reflectance associated with a thrust fault.	North Eastern B.C.	3	\$ 3 000 (A)
	W. Kilby	Tonstein and Bentonites, Northeastern B.C.  Year 3 of 3	Produce a synthesis of previous work of the author on altered volcanic ash bands in the coal measures of northeastern B.C. A Branch publication will discuss the mineralogy, chemistry, petrology, occurrence and use in coal exploration of the marker horizons. Minor fieldwork will concentrate on tonstein sampling for age dating purposes.	North Eastern B.C.	2	\$ 2 600 (A)
	B. Wrightson	Digital Coal Deposit	Complete digital model for Monkman deposit	B.C.	Nil	\$ 58 000 (A)

	W. Kilby	Modelling  Ongoing	and construct viewovers for Klappen and Telkwa deposits. Priority deposits are targeted for structural, quality and exploitability analysis. Geostatistics will be employed to evaluate the various deposit parameters with the objective of quantifying the variance of these parameters in various coal environments.			
	M. Holter D.A. Grieve	Coal Quality of B.C.  Ongoing	Compile and collect coal quality and quantity data for B.C. coals. Coal quality dictates the ultimate utilization of a coal. This project will compile all pertinent existing quality data and augment this with new data to provide a complete inventory of the province coal resources by quality and distribution. Detailed studies on specific deposits will break out the range of qualities, their potential uses and their distribution within the deposit.	B.C.	Nil	\$ 60 000 (A)
JK1	J. Koo	Evaluation of the Telkwa Coal Deposits  Year 4 of 4	Previous work has indicated that marked variations in sedimentary facies, coal seam geometry and coal quality characterize the Telkwa coal measures. This project will refine and correlate the sedimentary facies, coal seam geometry and coal quality.	Telkwa Coalfield	70	\$ 38 200 (A)
CK1	C. Kenyon	Vancouver Island Coals  Year 2 of 5	To compile and analyse all existing data on the Comox and Nanaimo coal basins to assist government and industry in assessing the potential of these areas with respect to new utilizations such as coal seam gas, coal-water fuel and traditional thermal applications.	Vancouver Island	20	\$ 22 500 (A)
	C. Kenyon	COALFILE  Ongoing	Exploration data from coal company assessment reports have been summarized and stored in a computer information system called COALFILE, to provide a quick and efficient	B.C.	Nil	\$ 12 700 (A)

method for handling a large volume of data, both in-house and industry. Maintenance of this file is an ongoing project. In 1988 data from 1987 assessment reports will be entered.

A. Matheson

Coal Sampling  
Programme

The project is essentially a coal sampling programme to be conducted in those coal deposits where little or no coal data exists. The unoxidized samples will be taken from drill cores and submitted for proximate analysis, rank determination and petrography. The final objective will be to produce a compendium of analyses for the coal deposits of the Province.

Vancouver  
Island

22

\$ 11,970 (A)



GEOLOGICAL SURVEY BRANCH  
PROJECT INVENTORY

Year: 1988-89  
Section: Resource Data and Analysis  
Category: Industrial Minerals

Project No.	Principal Researcher	Project Title	Project Statement	Area	No. of Days Fieldwork	\$ Budget M = MDA A = 'A' Base
11603	P. Read K. Green	Evaluation of the Industrial Minerals Potential of Tertiary Basins  Year 3 of 4	Prospecting for clay deposits, zeolites, pozzolanic rocks, diatomite, fuller's earth, germanium and beryllium in Tertiary environments will cover largely unexplored geological units in the B.C. interior. These basins and outliers are known to contain showings of ceramic and refractory clays and bentonites. The work done in previous years identified further potential for zeolites, pozzolans, perlite and some other industrial minerals. The project will assess the economic potential for discovery of these types of deposits.	Central B.C.	70 (PR) 80 (KG)	\$ 85 000 (M)
11611	J. Pell	Evaluation of Fluorspar Resource Potential in B.C.  Year 1 of 1	The project will provide an inventory of fluorspar resources and identify areas favourable for exploration and development. This includes an evaluation of using fluorine stream water anomalies as a path-finder to locate deposits of fluorspar. B.C. has a potential to replace imports of fluorspar for use in the aluminum and chemical industries in the Pacific Northwest.	B.C.	80	\$ 50 000 (M) \$ 22 000 (A)
06681	S. Butrenchuk	Gypsum Resource Assessment  Year 1 of 1	The project will provide an inventory of gypsum resources in B.C. Gypsum occurrences in Burnais Formation of Devonian age occur on the east side of the Rocky Mountain Trench along a strike length in excess of 80	Rocky Mtns., Stanford Range	80	\$ 75 200 (A)

kilometres. Present within this area are two producing and three abandoned quarries. The 1988 program will assess the gypsum potential of the Devonian Burnais Formation in the Stanford Range and the Triassic Whitehorse Formation in the Forget-Me-Not Creek area. Deposits and occurrences will also be evaluated for their native sulphur potential. A summary of gypsum deposits throughout the province will be documented.

RD480

G.V. White

Assessment of Wollastonite  
Deposits in B.C.

Year 1 of 1

Wollastonite is an important mineral filler in paints and ceramic products and is expected to replace short asbestos fibre applications in asbestos-cement and similar products. B.C. has an excellent opportunity to supply wollastonite for western Canada and the U.S. Pacific Northwest markets. The work will consist of geological mapping, sampling and petrographic examinations of five sites

- (1) Little Billy mine, Texada Island;
- (2) Sechelt Peninsula occurrences;
- (3) Fintry Point, west of Kelowna;
- (4) DIMAC mine near Clearwater;
- (5) Telegraph Creek occurrences.

B.C.

60

\$ 16 000 (A)

GEOLOGICAL SURVEY BRANCH  
PROJECT INVENTORY

Year: 1988-89  
Section: Resource Data and Analysis  
Category: Mineral Database

Project No.	Principal Researcher	Project Title	Project Statement	Area	No. of Days Fieldwork	\$ Budget M = MDA A = 'A' Base
11701	A. Wilcox	MINFILE  Ongoing	MINFILE is the G.S.B.'s computerized mineral inventory database containing over 9500 occurrences for B.C. Updating the database was started in late 1985 and over 5200 occurrences have been recoded and entered into the new system. In 1988 it is planned to code a further 2500 occurrences making the database 80% complete. Fourteen new map areas will be released over the next fiscal year.	B.C.	Nil	\$ 94 000 (M) \$120 000 (A)
RD200	T. Kalnins L. de Groot	Assessment Report Administration  Ongoing	The Mineral Inventory subsection reviews assessment reports (approximately 1000/year) for compliance with the Mineral Act Regulations. Photocopies, computer indices and maps and summaries in the annual volume Exploration in British Columbia are provided.	B.C.	Nil	\$ 69 000 (A)
RD220	C. Borsholm T. Kalnins L. de Groot	Assessment Report Indexing System Re-design (Aris)  Ongoing	This project will expand and maintain automated data processing for timely provision of services to public and industry. The system tracks reports through the approval process, produces an index to the library of more than 16,000 reports and publishes Part C of 'Exploration in British Columbia'. Design of a subsystem for the Portable Assessment Credits Accounts will be undertaken.	B.C.	Nil	\$ 52 000 (A)

GEOLOGICAL SURVEY BRANCH  
PROJECT INVENTORY

Year: 1988-89  
Section: Mineral Deposits and Regional Mapping  
Category: Applied Geochemistry

Project No.	Principal Researcher	Project Title	Project Statement	Area	No. of Days Fieldwork	\$ Budget M = MDA A = 'A' Base
11101	P. Matysek J. Gravel	Regional Geochemical Surveys	To provide basic geochemical data to National Geochemical Survey standards to help private sector mineral exploration find new deposits. 1988 surveys will cover Northern Vancouver Island and the adjacent mainland. Sample collection, preparation and analyses will be done under contract.	Northern Vancouver Island 92E, 92K, 92L, 102I,	90	\$200 000 (M) \$300 000 (A)
MD701	P. Matysek S. Day	Geochemical Studies	Geochemical research will be carried out in 1988 to help define appropriate sampling and analytical techniques for planned Regional Geochemical Surveys in 1989 and 1990 on Vancouver Island, Coast Mountains and Rocky Mountains. Further evaluation studies on moss mat, sediment and stream water sampling will also be conducted. Research on drainage sediment sampling for gold, platinum and rare earths will be continued.	B.C.	120	\$200 000 (A)
MD701	P. Matysek W. Jackaman	Analysis of Archived RGS Samples	To encourage/renew mineral exploration activity in previously sampled Regional Geochemical Survey areas. Archived stream sediment samples will be analysed for gold and other sought after metals not previously determined. 1988 analyses are planned for the Hope, Ashcroft, Pemberton, Taseko Lake and Bonaparte Lake areas.	92H, 92I, 92J, 92O, 92P		\$123 000 (A)

GEOLOGICAL SURVEY BRANCH  
PROJECT INVENTORY

Year: 1988-89

Category: Geoscience Research Grant Program

Project No.	Principal Researcher	Project Title	Project Statement	Area	\$ Grant M = MDA A = 'A' Base
RG88-01	V. Marcille (University of Guelph)	Zeolites	Use of zeolites from B.C. as a suitable cation exchanger to increase apatite solubility. Potential for improved apatite use in agricultural applications.	B.C.	\$ 5 000 (A)
RG88-02	B. Johnson (Carleton University)	Sicamous	1:50 000-scale geological mapping in Sicamous area. Emphasis is on Tertiary extension tectonics with an investigation of hangingwall-footwall relationships of the Eagle River fault.	Vernon 82L	\$ 5 000 (A)
RG88-03	A.B. Christie (N.Z.G.S.)	Cinola Gold-silver	Research into the genetic history of the Graham Island, Cinola gold-silver deposit. Particular emphasis will be placed on alteration and ore mineralogy and the deposit will be evaluated in relation to similar epithermal deposits in the Pacific Rim.	Graham Island 103F	\$ 4 000 (A)
RG88-05	H. Marsden (Carleton University)	Shasta Gold-silver	Geological mapping of the Shasta gold-silver property in the Toodoggone gold camp, north-western B.C. The Shasta is vein and stock-work epithermal deposit in the Jurassic Toodoggone volcanics. Emphasis is to be on stratigraphy, brittle structures and alteration of the host rocks with a comparison to other epithermal deposits in the camp.	Toodoggone River 94E	\$ 4 000 (A)
RG88-07	H. Plint (University of Alberta)	Horseshoe Range	This program is investigating the structure, metamorphism and age of a probable metamor-	McDane 104P	\$ 6 260 (A)

			<p>phic core complex in the Horseranch Range. It includes 1:50 000-scale mapping combined with appropriate lab work and should result in a comprehensive evaluation of the geology and the regional setting for mineral occurrences in the Horseranch Range area.</p>		
RG88-08	J. Peter (University of Toronto)	Windy Craggy	<p>This project is designed to evaluate the role of sediments in the formation of massive sulphide in volcano-sedimentary environments. It will include detailed descriptive and chemical mineralogy of the Windy Craggy deposit combined with a study of the sedimentary host rocks. The existence and extent of hydrothermal alteration and the importance of subvolcanic sills and the tectonic setting will be investigated.</p>	Tatshen- shini River 114P	\$ 20 000 (A)
RG88-09	K. Minehan (McGill University)	Ingenika Range	<p>Detailed 1:50 000 geological mapping in the Swannell and Johansen Lake area. Particular emphasis will be placed on the structural and petrological evolution of the Takla Group and Lay Range assemblage rocks as well as the nature of the contacts with the Lay and Ingenika group rocks.</p>	Fort Grahame 94C/12	\$ 8 000 (A)
RG88-10	O. Ijewliw (Queen's University)	Ultramafic Diatremes	<p>This is a geological and geochemical investigation of the setting, genesis and characteristics of ultramafic diatremes occurring in southeastern B.C. The study concentrates on the "HP", "Larry" and "Mark" diatremes. It is anticipated the study will provide a detailed crystallization history and an hypotheses for emplacement for these diatremes.</p>	Golden 82N	\$ 1 000 (A)
RG88-11	J. Rublee (Carleton University)	Tulameen Ultramafic Complex	<p>This study will help constrain the pressure-temperature-time regime of the Tulameen ultramafic complex. The project includes mapping and geochemistry of the ultramafics</p>	Hope 92H	\$ 2 200 (A)

with special emphasis on silicate mineralogy and tectonic setting. The project results will assist in further defining the nature and potential of chrome and platinum group metals within the ultramafics.

RG88-13	E. Van der Flier-Keller (University of Victoria)	Juan de Fuca	This project will evaluate the surficial geology and placer potential of Vancouver Island in the area between Sooke and Port Renfrew. It will describe nearshore morphology, geology and evolution of the surficial geology and identify heavy mineral assemblages and distribution within the study area.	Cape Flattery 92C	\$ 5 000 (A)
RG88-14	K. Bellefontaine (McGill University)	Ingenika Range	1:50 000-scale mapping in the Ingenika Range of north-central B.C. The project will place particular emphasis on the structural and metamorphic evolution of the Ingenika Group and the nature of its contact with rocks of the Lay Group to the west.	Fort Graham 94C	\$ 8 000 (A)
RG88-15	J. Knight (The University of B.C.)	Placer Gold	To provide a genetic classification of some placer and lode gold occurrences in B.C. Electron microprobe techniques will be applied to gold samples from various sites in an effort to "fingerprint" the sources of gold by identifying trace element and textural features of the samples. The technique has potential to be applied directly in the mineral exploration process looking for new gold deposits.	B.C.	\$ 2 000 (A)
RG88-16	A.E. Williams-Jones (McGill University)	Toodoggone Age Dating	To determine the age of epithermal-related gold-silver mineralization in the Toodoggone district and to place the mineralization within a lithotectonic framework which may be used to guide further exploration within this mining camp.	Toodoggone River 94E	\$ 1 500 (A)

RG88-17	N. Eyles (University of Toronto)	Cariboo Gold-Placers	Geological mapping to identify the stratigraphy of Pleistocene gold placers in the Cariboo mining camp. Objective is to enhance the economic potential of the Cariboo and other gold-placer camps and to describe in more detail the nature of placer deposits in glacial sediments.	McBride 93H	\$ 7 000 (A)
RG88-18	K. Fletcher (The University of B.C.)	Platinum Geochem	To study the distribution of platinum and palladium in soils and sediments within the Franklin mining camp, Tulameen district and Scottie Creek. The objectives are to define geochemical models for the dispersion of platinum and associated metals away from their source rocks. Information gained could be directly applied in mineral industry exploration programs.	Hope 92H	\$ 15 000 (A)
RG88-19	J. Fyles (Consultant)	Greenwood	1:50 000-scale mapping of the Greenwood area between Grand Forks and Rock Creek. The project will clarify and integrate the stratigraphy and structure of this region and will add to the existing geological database presently available to the mining industry.	Penticton 82E	\$ 12 500 (A)
RG88-20	T. Calon (Memorial University)	Shulaps Ophiolite	The project combines field and laboratory studies of the petrology and internal structure of the Shulaps ophiolite complex. It also proposes to examine the structural relationships of the Shulaps massif with adjacent, Bridge River complex and Cadwallader terrane. The research will include an evaluation of the setting and potential of chromite and platinum group metals, listwanite-associated gold and other vein-related economic mineralization.	Pemberton 92J	\$ 4 000 (A)
RG88-21	M. MacLean (University of Calgary)	Magnesite	1:50 000-scale geological mapping of Baymag's Mount Brussilof magnesite deposit.	Canal Flats	\$ 1 000 (A)



			The purpose is to identify the lithology, structure and geological environment of the deposit and to develop a model for the development of such deposits in southeastern B.C.	82J	
RG88-22	J. Muller (Consultant)	Mount Washington	Investigation and verification of suspected detachment faults in the Mount Washington area of Vancouver Island. These faults may prove to be a structural control for the copper-gold-silver occurrences in the area. The program would produce a revised 1:50 000 geology map for the area northeast of Mount Washington.	Alberni 92F	\$ 5 000 (A)
RG88-24	J.A. Fillipone (U.B.C.)	Iskut River Structures	This project will attempt to quantitatively evaluate the nature and timing of brittle and ductile shearing near the boundary of the Coast Plutonic Complex and the Stikine Terrane. Objective is to enhance the geological database to allow for modelling the formation processes of economic mineralization and structures in the region.	Iskut 104B	\$ 5 000 (A)
RG88-25	P.A. Wagner (Univ. of Alberta)	Sm-Nd Geochronometry	Middle Proterozoic basaltic magnetism in the East Kootenay area seems to mark a period of crustal instability. Accurate determination of the time(s) of intrusion of the basaltic Moyie sills will set limits on the chronology of the formation of ore deposits in the Purcell Super-group. A Sm-Nd whole-rock isochron could confirm earlier U-Pb dating of zircon and would provide information on mantle source and magmatic evolution prior to crystallization.	Fernie 82G	\$ 2 000 (A)
RG88-26	M. Coleman (Carleton University)	Structures, Bridge River Terrane	Project will define the structure and the Jura-Cretaceous accretionary history of the Bridge River terrane including the internal faults which juxtapose different metamorphic zones. It will attempt to establish the chronology and	Pemberton 92J	\$ 1 000 (A)

			relationships between extension structures within the terrane, and nearby strike-slip faults which bound the terrane. The data collected in the research will be used to aid interpretation of the Coast Mountain transect of LITHOPROBE.		
RG88-27	R.J. Scammell (Queens University)	Shuswap Metamorphic Complex	Project will study the stratigraphy, structure and thermotectonic evolution of the Shuswap Metamorphic Complex within the northern Monashee Mountains of the Omineca Crystalline Belt. The research will result in a regional geological compilation map and a more precise definition of the thermo-tectonic evolution of the Shuswap Metamorphic Complex.	Seymour Arm 82M	\$ 2 000 (A)
RG88-28	M. Lamberson (U.B.C.)	Gates Formation-Coal	The proposed research will document lateral and stratigraphic variation in organic and inorganic facies of the coal deposits in the Gates Formation. The composition of the coals will be used to interpret a sedimentological framework and to formulate depositional models for the Gates Formation. This program will result in an ability to predict coal composition variability and quality on minesite and regional scales.		\$ 8 000 (A)
RG88-29	J.D. Bennett (Western Washington Univ.)	Harrison Lake	The proposed research will study the geochronology of the Harrison Lake area with particular emphasis on the Harrison Lake fault. Objective is to more fully define the mechanisms of Late Cretaceous orogeny.	Hope 92H	\$ 1 300 (A)
RG88-30	M.A. Hettinga (Western Washington Univ.)	Harrison Lake	This study will examine structures associated with the Harrison Lake fault and analyse metamorphic rocks east of the fault. Objective is to determine the strain associated with the Harrison Lake fault, the chronology and magnitude of the deformation and the relationship of metamorphism in the area.	Hope 92H	\$ 1 400 (A)
RG88-32	J. Oliver	Muddy Lake	This project will study the geological controls	Tulsequah	\$ 15 300 (A)

(Queens University)

of the gold mineralization at the Muddy Lake - 104K  
Golden Bear deposits. Objectives are to complete  
surface and underground geological mapping, and  
to identify the structural and lithologic controls  
on ore mineralization.

GEOLOGICAL SURVEY BRANCH  
PROJECT INVENTORY

Year: 1988-89

Category: MDA Research Grants to U.B.C.

Project No.	Principal Researcher	Project Title	Project Statement	Area	Days Fieldwork	M = MDA A = 'A' Base
A	Corilane Bickford	Wellington Coal Bed	Investigation of sedimentological factors that affect the distribution, mining conditions, and quality of coal in the Wellington Coal Bed at Nanaimo.		92G	\$ 5 000 (M)
B	Craig Leitch	Bralorne-Pioneer gold camp	Detailed analysis of the Bralorne-Pioneer gold camp, including alteration, regional metallogeny from galena lead data, fluid inclusion analyses, oxygen isotope analyses, and probe analyses of alteration assemblages.		92J	\$ 5 200 (M)
C	Dr. K. Fletcher	Seasonal variations in gold content of streams	Investigating seasonal variations in gold content of streams and the impact of that variation on mineral exploration for gold. His work will lead to recommendations for optimum sampling times and methods.		82L	\$ 6 600 (M)
D	Dr. M. Orchard	Identification and classification of conodonts	Identification and classification of conodonts to assist field geologists with the determination of the age, depositional environment, provenance and thermal history of rocks.		B.C.	\$ 5 500 (M)
E	Drs. G. Rouse and W. Mathews	Tertiary sediments in the Vanderhoof area	Detailed examination of old exploration drill core to provide the first detailed analysis of late Tertiary sediments in the Vanderhoof area.		93G	\$ 2 000 (M)
F	Myra Keep	Averill Plutonic Complex	Mapping of the Averill Plutonic Complex, near Grand Forks, to examine relationships with Tertiary alkaline volcanic rocks and to gain		82E	\$ 6 600 (M)

			insight into the controls of reported platinum mineralization.		
G	Arthur Halleran	Alkalic complex near Manson Creek	Investigate an unusual rare-earth enriched alkalic complex near Manson Creek.	930	\$ 3 600 (M)
H	Urs Mader, Peter Lewis, Dr. K. Russell and Dr. C. Godwin	Mapping of the Fairview slopes area	Detailed mapping of the Fairview slopes area with an emphasis on structure to determine the relationships between gold-bearing quartz veins and the structural deformation.	82E	\$ 6 000 (M)
I	Dr. A. Sinclair	Carbon in gold-bearing	Investigate the origin of carbon in gold-bearing veins and alteration zones at Total Erickson Gold Mines Cassiar deposit.	McDane 104P	\$ 3 000 (M)
J	R. Berman	Stable phase diagrams	Develop user-friendly microcomputer software for calculation in display of stable phase diagrams for the interpretation of ore-forming processes.	B.C.	\$ 3 000 (M)
K	P. Michael	Tulameen Ultramafic Complex	Define silicate and sulphide mineralogy of the pyroxenite zone of the Tulameen Ultramafic Complex in order to further the understanding of the precipitation of platinum minerals.	92H	\$ 3 500 (M)