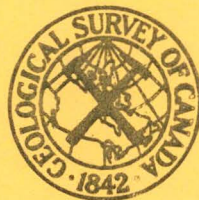


CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES

GEOLOGICAL SURVEY OF CANADA

CATALOGUE OF SCIENTIFIC PROJECTS
SCIENTIFIC PROGRAM
FIELD PROGRAM
1970-1971

Compiled by Gertrude E. Derry
Office of Chief Geologist



FOR GEOLOGICAL SURVEY USE

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OTTAWA
1970

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PREFACE

This catalogue of all approved scientific projects of the Geological Survey of Canada as of 6 July 1970 is arranged to indicate: (1) the total scientific program of the Survey for the period 1 April 1970 to 31 March 1971; and (2) the field program for the summer of 1970.


2. As a catalogue it lists and briefly describes all scientific projects, both active and inactive. These total 506 and are compiled from instructions issued to project leaders for 1970-71 via forms CG 48A, B and C. Thus it comprises the current authority on such matters as project numbers, titles and objectives, supersedes previous catalogues and documents concerning scientific projects, and cancels all projects not listed. Projects are listed in numerical order. Indexes by project leader, division and section, and province will be found at the end.

3. The total scientific program, office, laboratory and field, for all persons for all or any part of 1970-71 comprises those projects listed as active (X) in the next to last column. These total 473.

4. The field program for the summer of 1970 comprises the field component of those active projects marked by an asterisk after the project number. These total 201. No distinction has been made between a minor field component such as a few days, and a major component requiring the entire field season. The location and brief description of many of the resulting field parties is shown on Map 1-1970 "Geological Survey of Canada Field Activities, 1970".

5. In a few instances instructions have not been issued concerning the 1970-71 action to be taken on projects approved previously. Such projects are listed but their uncertain status for 1970-71 is indicated by the word "undecided" in the last two columns.

6. Further details concerning each project are in Branch Registry, filed according to project number.



C.S. Lord,
Chief Geologist.

Distribution:

Project Leaders
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Provinces & IAND (appropriate parts)
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LIST OF ABBREVIATIONS USED

ADMINISTRATION DIVISION - ADM

- ChG - Chief Geologist Section
- SP - Special Projects

GEOLOGICAL INFORMATION PROCESSING DIVISION - GIP

ECONOMIC GEOLOGY AND GEOCHEMISTRY DIVISION - EGG

- Adm - Administration Section
- MD - Geology of Mineral Deposits Section
- G - Geochemistry Section
- M - Mineralogy Section
- AC - Analytical Chemistry Section
- GP - Geomathematics Program
- UP - Uranium Program
- SP - Special Projects

EXPLORATION GEOPHYSICS DIVISION - EG

- Adm - Administration Section
- EM - Electrical Methods Section
- MM - Magnetic Methods Section
- RSM - Remote Sensing Methods Section
- SM - Seismic Methods Section
- RM - Rock Magnetism Section
- TGDA - Theoretical Geophysics and Data Analysis Section
- SP - Special Projects

CRUSTAL GEOLOGY DIVISION - CG

- G - Geochronology Section
- Pet - Petrology Section
- CPM - Cordillera and Pacific Margin Section
- PS - Precambrian Shield Section
- AELAM - Appalachian Eastern Lowlands and Atlantic Margin Section
- CR - Coal Research Section
- EP - Eastern Paleontology Section
- SP - Special Projects

INSTITUTE OF SEDIMENTARY AND PETROLEUM GEOLOGY DIVISION - ISPG

- Adm - Administration Section
- AI - Arctic Islands Section
- SG - Structural Geology Section
- PS - Paleozoic Stratigraphy Section
- MS - Mesozoic Stratigraphy Section
- WP - Western Paleontology Section
- GofP - Geology of Petroleum Section
- SRS - Senior Research Scientists

QUATERNARY RESEARCH AND GEOMORPHOLOGY DIVISION - QRG

- Adm - Administration Section
- RSP - Regional and Stratigraphic Projects Section
- PG - Paleontology and Geochronology Section
- EGG - Engineering Geology and Geodynamics Section

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
380077*	Analysis of rocks and minerals Obj.: To provide compositional data on geological materials as a contribution to the solution of geological problems	Abbey, S	EGG	AC	-	-	X
400006*	Preparation of collections of Canadian rocks and minerals for distribution to the public Obj.: To make available for distribution to educational institutions and the Canadian public representative collections of Canadian rocks and minerals that will assist prospectors and promote interest in the mineral industry	Gauthier, CHR	EGG	M	-	-	X
400007	Examination and report on geological specimens received from public Obj.: To examine and identify specimens of rocks, minerals and ores and to answer enquiries about their nature and possible value, as a free service to the Canadian public	Gauthier, CHR	EGG	M	-	-	X
480191	Monograph of the Canadian <u>Buchia</u> (=Auce lla) Obj.: To describe and illustrate Canadian representatives of this stratigraphically important genus using fossil collections available at this Survey and elsewhere. To give a stratigraphical appraisal of all described species. To investigate critically the relationships of Canadian species with the American, Eurasian, and Indo-Pacific species and to elucidate the ages of the Canadian <u>Buchia</u> zones in terms of standard stages.	Jeletzky, JA	ISPG	WP	-	-	X
490001	Mesozoic and Tertiary on the west coast of Vancouver Island and in Quatsino Sound Obj.: A stratigraphic-paleontological study with special attention to the Lower Cretaceous-Jurassic contact and possibilities of Tertiary strata with respect to oil and gas	Jeletzky, JA	ISPG	WP	BC	92 E,F,L	X

Asterisk in first column indicates project has a field component
 Brackets indicate seasonal employee or other non-staff
 Underscoring indicates province of 1970-71 field work

490015 Reference collection of standard X-ray powder patterns of minerals Traill, RJ EGG M - - X

Obj.: To assist in the identification and inventory of potential mineral resources in Canada by compiling a reference collection of specimen mounts, X-ray diffraction patterns and tabulated data for the identification of minerals by Canadian mineralogists engaged in studies of minerals and mineral deposits

490038* Miscellaneous field investigations by staff at Vancouver office Wheeler, JO CG CPM BC 92;93;94;103;104 X

Obj.: Varied objectives according to the particular investigations, which include supervision of Geological Survey field parties, examination of mining properties, assistance in various government engineering projects such as water power sites, dams, tunnels, and location of convenient deposits of industrial minerals and rock materials

500029 Identification and biostratigraphic interpretation of referred fossils Staff of Eastern & Western Paleontology Sections ISPG CG WP EP - - X

Obj.: By the study of fossils collected by officers of the Geological Survey of Canada, members of other organizations and the general public, to provide identifications and ages vital to correlation of the host rocks and to the dating of geological events. To describe important fossils from these collections to further knowledge of paleontology and biostratigraphy of Canada.

500038 Coal reserves of Canada and studies of coal deposits in Canada Latour, BA ISPG Adm - - undecided

Obj.: To collect, organize, assess and maintain geological data necessary for the estimation of the coal reserves of Canada; to prepare for publication reports and illustrations concerning Canada's coal reserves; to have up-to-date geological knowledge of all coalfields in Canada

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
500108	Conodont biostratigraphy of the Hull Member, Ottawa Formation	Uyeno, TT	ISPG	WP	Ont Que	31 G/5	X	
	Obj.: To establish conodont zonation of the Hull Member, Ottawa Formation, and thereby facilitate correlation of this unit with the North American standard sequence in New York State							
500336	Devonian of Alberta, British Columbia and southern District of Mackenzie	Belyea, Helen R	ISPG	SRS	Mack	Pts 72,73,74,82,83,84,85, 94,95	X	
	Obj.: To publish a series of papers on the Devonian discussing rock types, correlations, facies changes, disconformities, faults, etc.; in an attempt to elucidate the reasons for Devonian facies distribution and hence designate general areas of potential hydrocarbon reservoir rocks							
510014	Wolf Lake map-area	Poole, WH	CG	CPM	Yk	105 B	X	
	Obj.: Geological study and mapping of the Wolf Lake map-area so as to afford information on the age, structure and sequence of the bedrock formations and on the size, grade, mode of occurrence, origin, and potentialities of the mineral deposits, and thus aid economic development of an area along Alaska Highway							
510022	Quaternary geology, Montreal Island	Prest, VK	QRG	RSP	Que	Pts 31 H/5,12	X	
	Obj.: To determine the character, distribution, form and thickness of the glacial and postglacial overburden with particular reference to its possible economic utilization							
520024	Surficial geology, Drumheller area	Stalker, AM	QRG	RSP	Alta	82 P	X	
	Obj.: To map, describe and explain the Quaternary deposits and landforms in order to elucidate the glacial history of the region and to provide areal geological knowledge including data pertinent to groundwater, engineering, and agriculture							

520230 Silurian coral faunas of eastern and Arctic Canada Bolton, TE CG EP - - X

Obj.: Study and description of the coral faunas from the Silurian System principally of Manitoulin Island, and Anticosti Island and Arctic Canada in order to determine finer faunal zonations and detailed assemblages. In cooperation with B.S. Norford some material from western and Arctic Canada may also be investigated.

530008 Lardeau map-area, B.C. Reesor, JE CG Pet BC 82 K E½ X

Obj.: To determine the stratigraphy structure and geological history of the Lardeau map-area and to relate these geological features to the mineral occurrences

530014* Geology of Canadian Lithophile metals (Li, Be, Sn, W, Mo) Mulligan, R EGG MD - - X

Obj.: To carry out comprehensive research on the geology of lithophile metals (lithium, beryllium, tin, and tungsten) in order to provide a geological basis for exploration and assessment of such deposits in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypotheses on geological environment, provenance, and genesis of the deposits; and (5) determination of regions and geological units in Canada most favourable for the occurrence of each type of deposit.

530030 Geology of Prince Edward Island Prest, VK ORG RSP PEI 11 E/15,L;21 I/8,9,16 X

Obj.: To determine the character, extent, distribution, age and origin of the bedrock formations and glacial and postglacial deposits and their possible utilization

540025 Milliken Lake area, Saskatchewan Bell, CK CG PS Sask Pt 74 N/7 X

Obj.: To provide detailed information on the age, structure, sequence, relationships, thickness, and origin and potentialities of the mineral deposits

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
540027	Mineral industry of the mainland Northwest Territories	McGlynn, JC Thorpe, RI	ADM	ChG	Kee Mack			X
	Obj.: To secure information and prepare for publication reports on the mineral industry of the mainland Northwest Territories as a contribution to economic development							
540028*	Isotopic age determinations of rocks and minerals	Wanless, RK	CG	G	-			X
	Obj.: To determine the geological age of rocks and minerals and geological events using isotopic methods							
550004*	Cretaceous and Jurassic of Richardson Mountains, Porcupine Plains, and Eagle Plains	Jeletzky, JA	ISPG	WP	Mack Yk	116;106 W $\frac{1}{2}$		X
	Obj.: To study the stratigraphy and paleontology of Cretaceous and Jurassic formations of the region in order to understand the most essential features of the facies pattern, sequence, and lateral extent of lithological units, palaeogeography and geological history. To describe and to figure the most important elements of the faunas.							
550101*	Systematic reference series of the National Mineral Collection and G.S.C. collections of minerals and ore suites	Steady, HR	EGG	M	-			X
	Obj.: To provide specimens of known minerals and ores as standards for comparison and identification of unknown minerals, and for determination of additional chemical, physical and structural data for the species where these are lacking. The ore collection is designed to provide comparison between ores that are mined during different periods of time.							
560006	Geological survey of NTS 82 G W $\frac{1}{2}$ (Fernie W $\frac{1}{2}$)	Leech, GB	CG	CPM	BC	82 G W $\frac{1}{2}$		X
	Obj.: To determine and interpret the stratigraphic, structural and economic geological features of the region for publication at 1 inch to 2 miles							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
560019	Quaternary geology, Ottawa map-area	Gadd, NR	QRG	RSP	Ont, Que	31 G/5	X	
	Obj.: To map, describe and explain the Quaternary deposits and landforms in order to provide: (1) areal information; (2) knowledge of the Quaternary stratigraphy and chronology of the region; and (3) background information applicable to engineering, groundwater, and soils mapping							
560029	Quaternary geology, Avalon Peninsula, Newfoundland	Henderson, EP	QRG	RSP	Nfld	Pts 1 K-N; 2 C	X	
	Obj.: To map, describe and explain the Quaternary deposits and landforms in order to provide information on: (1) the nature, origin, extent and stratigraphic relationships of the various deposits; (2) Quaternary chronology; (3) deposits of current or potential economic value; and (4) features of the deposits applicable to groundwater, engineering and agriculture							
570001*	Operation Mackenzie	Douglas, RJW	ADM	SP	Mack	85; pt 95	X	
	Obj.: To acquire stratigraphic information on the sequence of bedrock formation, to effect their correlation and study their variations and mode of origin; to prepare geological maps of the plains areas at 1 inch to 8 miles and of the mountains at 1 inch to 4 miles; to assess the economic possibilities of the area as a source of oil, gas, coal, and minerals							
570007	Quesnel map-area	Tipper, HW	CG	CPM	BC	93 B		X
	Obj.: To interpret the structure, stratigraphy and geological history of the Quesnel area and to evaluate the mineral potential							
570015	Silurian-Ordovician macro bio-stratigraphy of Anticosti Island	Bolton, TE	CG	EP	Que	22 H; 12 E, F		X
	Obj.: To obtain data on the Ordovician and Silurian subsurface rocks of Anticosti Island from which may be prepared: (1) precise description of all appropriate units of the Ordovician and Silurian strata including succession, thickness lithology, facies change, and faunal content; (2) description and classification of the significant fauna of each stratigraphic unit; (3) local and regional correlation consistent with the above data; and (4) a geological map							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
570022*	Geochemical study of mineral deposits in the Bathurst-Newcastle area, N.B.	Boyle, RW	EGG	SP	NB	Pts 21 O/9,16,P/12,13	X	
	Obj.: To elucidate the genesis of the massive sulphides of the Bathurst-Newcastle area of New Brunswick							
570029*	Geology of iron and manganese deposits in Canada	Gross, GA	EGG	MD	-	-	X	
	Obj.: To carry out comprehensive research on the geology of iron and manganese deposits in order to provide a geological basis for exploration and assessment of iron and manganese potential in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypotheses on geological environment, provenance, and genetic processes of iron and manganese deposits; (5) determination of regions and geological units in Canada most favourable for the occurrence of each type of deposit							
570119	Meteorite studies	Douglas, JAV	CG	Pet	-	-		Undecided
	Obj.: To recover, and study and report on meteorite falls in Canada, and to curate, develop and display the National Meteorite Collection							
570148	Radiocarbon dating program	Blake, W Jr	QRC	PG	-	-	X	
	Obj.: To plan and coordinate the radiocarbon dating program of the Geological Survey							
580003	Belcher Islands, N.W.T.	Jackson, GD	CG	PS	Kee	33 NW, 34 SW		X
	Obj.: To determine the depositional environment, stratigraphy, age and structure of the rocks of the islands							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
580009*	Operation Pelly	Tempelman-Kluit, DJ	CG	CPM	Yk	105 K,J,I,F,G	X
	Obj.: To describe the main rock units, their ages, stratigraphic and structural relationships, and geologic history; to relate these factors to the regional geology of Yukon Territory; and to show where possible the relation of known mineral deposits to this framework						
580036	Geology of titanium and titaniferous deposits of Canada	Rose, ER	EGG	MD	-	-	X
	Obj.: To carry out comprehensive research on the geology of titanium deposits in order to provide a geological basis for exploration and assessment of Titanium potential in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of titanium deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypotheses on geological environment, provenance, and genetic processes of vanadium deposits; and (5) determination of regions and geological units in Canada most favourable for the occurrence of each type of deposit						
580037*	Maintenance of the palaeontological type collection	Bolton, TE	CG	EP	-	-	X
	Obj.: To catalogue, store, and maintain GSC National Type collection of fossils so that they are readily available for research by GSC and outside personnel						
580144	Lead and sulphur isotope geology of Keno and Galena Hills, Yukon	Boyle, RW	EGG	SP	Yk	105 M;106 D(pts of)	X
	Obj.: To elucidate the genesis of the lead-zinc-silver deposits of Keno and Galena Hills by means of lead and sulphur isotopes						
580153*	Lexicon of stratigraphic names used in Canada	Bolton, TE	CG	EP	-	-	X
	Obj.: Lexicon of Stratigraphic Names in Canada production, with preparation and maintenance of files recording all stratigraphic names used in Canada						

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
580159*	Subsurface studies of each of the Palaeozoic systems of southwestern Ontario (Cambrian, Ordovician, Silurian and Devonian)	Sanford, BV	CG	AELAM	Ont	30 L-N;31 C,D;40 G,I,J, O,P;41 A,H	X	
	Obj.: By the study of sample cuttings and core from wells drilled for oil and gas to describe and interpret the geology of each of the Paleozoic Systems, and to assess their economic potentialities							
580160	Catalogue of Canadian minerals	Traill, RJ	EGG	M	-	-	X	
	Obj.: To assist in the identification and inventory of potential mineral resources in Canada by compilation and publication of a Catalogue of Canadian Minerals that provides reference material for direct use by earth scientists, the mining industry and the general public							
580175	Analytical services and development in geochemistry	Lynch, JJ	EGG	G	-	-	X	
	Obj.: To provide the specialized analyses required by the geochemical exploration and geochemical census programmes, in requisite volume and with sufficient speed to ensure that these programmes are able to meet their objectives. As time permits, to provide limited analytical services to other Division personnel as required.							
590009	Prince George map-area	Tipper, HW	CG	CPM	BC	93 G		X
	Obj.: To study and interpret the structure, stratigraphy, and geological history of the Prince George area and to evaluate the mineral potential of the region							
590014	Mount Robson map-area	Mountjoy, EW	ISPG	SG	BC,Alta	83 E E $\frac{1}{2}$		X
	Obj.: 4 mile mapping with special attention to stratigraphy and structure as related to oil and gas exploration							
590019	Roads to Resources Project	Jackson, GD	CG	PS	Ont	42 M;43 D;52 N-P;53 A-C	X	
	Obj.: To obtain data concerning the mineral potential of the map-areas in order to determine the need for and location of roads intended to facilitate and expedite development							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
590194	Monograph of the Canadian belemnites	Jeletzky, JA	ISPG	WP	-	-	X	
	Obj.: To describe and figure all hitherto known Canadian belemnite species and genera. The zonal value of the individual taxa concerned is to be appraised and the results incorporated in the preliminary and final reports							
590258	Sea magnetometer survey compilation	Hood, PJ	EG	MM	-	-	X	
	Obj.: Compilation of all available results of sea magnetometer surveys over the continental shelves in order to produce 4-mile aeromagnetic and ship magnetometer maps							
590283*	Muskox Intrusion	Irvine, TN	CG	Pet	Mack	86 D/3, J/2, 3, 7, 11, 14, 16	X	
	Obj.: To determine the chemical, petrographic and mineralogical characteristics of the Muskox intrusion with the purposes of describing its crystallization history, relating it to events of basaltic magmatism in the Coppermine province, and defining its significance in relation to the general origin of layered intrusion							
590309	Study of mica group minerals and associated host rocks	Rimsaite, JYH	EGG	M	-	-	X	
	Obj.: To contribute to the knowledge of Canadian mineralogy, petrology and mineral deposits through studies of the physical properties and chemical composition of micas, and the relations of these variables to the mineralogy, petrology and chemistry of their host rocks							
590457	Radiocarbon laboratory development and operation	Lowdon, JA	QRC	PG	-	-	X	
	Obj.: 1. To determine the age of carbonaceous matter using radiocarbon dating techniques, to ensure continuing and improving precision of existing techniques; and to keep abreast of current research on new techniques. 2. To conduct research on variations in the radiocarbon content of modern organic material and its application to age determinations on fossil material							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
600004	Regional correlation - northwest Canadian Shield	McGlynn, JC	CG	PS	Mack	86 C/15 E $\frac{1}{2}$; 85 B/13; 86 B/12 E $\frac{1}{2}$	X	
600008	Obj.: To determine the stratigraphy and structure of the Snare and Cameron Bay strata, as a contribution to the correlation and interpretation of the Proterozoic rocks of the N.W.T.	Project Klondike, Quaternary geology Hughes, OL and geomorphology phase	QRC	RSP	Yk	Pts 115 I, J, K E $\frac{1}{2}$, N E $\frac{1}{2}$, O, P	X	
600009	Obj.: To determine the stratigraphy, geomorphology and distribution of Tertiary to Recent deposits of the Klondike district and surrounding area in order to provide background information for heavy mineral phase (Gleason, McLeod) and to elucidate Quaternary and late Tertiary history of the region	Geology of copper deposits in Canada Kindle, ED	EGG	MD	-	-	X	
600011	Obj.: To carry out comprehensive research on the geology of copper deposits in order to provide a geological basis for exploration and to provide a national authority on copper potential in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of copper deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypothesis on geological environments, provenance, and genetic processes of copper deposits; and (5) determination of regions and geological unit in Canada most favourable for the occurrence of each type of deposit	Faunal zonation of Triassic rocks of Tozer, ET northeastern British Columbia	ISPG	WP	BC	83 B, C, E, L; 93 I, O, P; 94 B, G	X	
600032	Obj.: To establish and refine faunal zonation of Triassic rocks of NE British Columbia in order to provide the means for correlating within the area and to provide data for refining the Triassic time scale	Belleoram map-area	CG	AELAM	Nfld	1 M	X	
	Obj.: The project is expected to provide a suitable geological map, a complete description of rock units, and an appropriate description and interpretation of the general structure, historical and economic geology features of the map-area							

600033 Postglacial marine shorelines Henderson, EP QRG RSP Nfld Pts 1,2,12 X
 Trinity Bay to White Bay,
 Newfoundland

Obj.: To map and explain late-glacial and postglacial shorelines and associated marine deposits in order to provide information on: (1) recent changes in sea level and land uplift and tilt; (2) distribution and mode of retreat of the Newfoundland Pleistocene ice cover; and (3) occurrence of deposits of economic value. Publication scale as warranted by results.

600206* Subsurface study of Mississippian, Procter, RM ISPG PS BC 93 I,O,P;94 A,B,G-K,N-P X
 Pennsylvanian and Permian stratigraphy of NE B.C. and adjacent areas

Obj.: To determine stratigraphically significant subdivisions of the interval; their distribution and inter-relationships; and deduce the sequence of geologic events which produced them

600213 Mid- to Late Cretaceous (Hauterivian) Jeletzky, JA ISPG WP - X
 to Maestrichtian) index fossils of western Cordillera

Obj.: To prepare a series of fossil plates illustrating a selection of best known and most useful mid- to late Cretaceous (Hauterivian to Maestrichtian) marine invertebrate fossils of the western Cordillera. A simple correlation chart and introductory remarks will illustrate the zonal sequence of all figured index fossils and their age in terms of the international standard stages.

600218 Faunal study of late Ordovician and Norford, BS ISPG WP BC,Alta 83 C; 82 G,J,K,N,O X
 Silurian rocks of southeast British Columbia and adjacent Alberta

Obj.: Description of faunas of Beaverfoot and Tegart Formations, lithologic and biostratigraphic correlation of these units, positioning of Ordovician-Silurian boundary; establishment of sequence of biochronological zones for the interval represented by these units. The projects study of well preserved faunas from an inexpensively accessible part of the Cordillera will provide time control applicable throughout the Cordillera for exploration of the natural resources of Upper Devonian and Silurian carbonate rocks.

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
600225	Microfossils from the Ordovician Red River Formation	McGregor, DC	CG	EP	Man	63 A	X
	Obj.: (1) to determine the presence of phytoplankton in the rocks; (2) to assess their role in the biota of the Red River Formation; and (3) to determine their biostratigraphic significance						
600227*	Devonian plant microfossils of eastern Canada	McGregor, DC	CG	EP	Ont, <u>Que</u> , NB	42;40;32;22;21	X
	Obj.: Morphologic and taxonomic revision of the Gaspé and related spore floras which will be related to the stratigraphy of the areas. To establish the spores and other palynomorphs as correlation markers and age determinants.						
600307	X-ray emission analysis	Lachance, GR	EGG	M	-	-	X
	Obj.: To contribute to the knowledge of Canadian mineralogy and mineral deposits through research and development of methods and concepts of x-ray emission analysis and application of these to the analysis of geological materials. To improve the quality and rate of production of x-ray fluorescence analyses that may be applied to geological research and to provide "custom" XRF analyses in support of G.S.C. research projects						
600353	Dibranchiate Volume of the Treatise on Invertebrate Palaeontology	Jeletzky, JA	ISPG	WP	-	-	X
	Obj.: To prepare an authoritative summary of the present state of knowledge of subclass Dibranchiata based on the study of literature on the global scale supplemented by results of writer's personal research of this subclass in Canada and abroad. The project is to be carried out in conjunction with the writer's monographical study of the Canadian belemnites (Project 590194) now in progress.						
600456*	Subsurface and regional studies in eastern Canada as related to oil and gas	Howie, RD	CG	AELAM	-	-	X
	Obj.: To provide data pertaining to the exploration for and development of oil and gas accumulations in Quebec, the Atlantic Provinces and Offshore areas for the use of industry and government agencies in the search for petroleum in eastern Canada						

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
610002*	Axel Heiberg and Ellesmere Islands	Thorsteinsson, R	ISPG	SRS	Frank	39 G,H;49 C-H;59 E-H; 120 B,C;340 B,C;560 A,D	X	
	Obj.: (a) To obtain information on and improve the understanding of the age, structure, stratigraphy and origin of the post-Precambrian bedrock formations, and (b) to assess the economic potential of the area							
610007*	Operation Porcupine	Norris, DK	ISPG	SG	Mack Yk	106 E,F,L,M;107;116 F E ₂ ¹ , G-J,K E ₂ ¹ ,N E ₂ ¹ ,O,P	X	
	Obj.: Critical evaluation of the structural geometry and stratigraphy within these map-areas of northern Yukon Territory and western District of Mackenzie for documentation of the nature, origin and mechanics of the deformation and its bearing on the hydrocarbon and mineral potential of the region							
610011	Taseko Lakes map-area	Tipper, HW	CG	CPM	BC	92 O	X	
	Obj.: To interpret the structure, stratigraphy and geological history of the Taseko Lakes area and to evaluate the mineral potential							
610014	Cretaceous stratigraphy, Peace River to 60°	Stott, DF	ISPG	MS	BC	94 B,G,J,K,N,O	X	
	Obj.: To describe the stratigraphic successions, to collect samples for laboratory studies and to collect fossil flora and fauna; to provide data on the correlation of Cretaceous strata, their lateral variations, their potentialities as sources of oil and gas, and their suitability as reservoirs for those fuels; to establish the relationships with equivalent successions studied between Peace and Smoky Rivers and in the region of Liard and Mackenzie Rivers							
610018	Geometry and Mechanics of Folds	Price, RA	ISPG	SG	BC,Alta	82 G E ₂ ¹ (mainly)	X	
	Obj.: To investigate the variations in the geometry of folds developed in different parts of the stratigraphic succession, and the relationships between fold geometry, lithology of the folded beds, structural environment of the folds, and variations in macro- and micro-fabric in the folds							

610019* Ordovician and Silurian biostratigraphy of British Columbia, Alberta, Yukon, Mackenzie, and Franklin

Obj.: Establishment of sequence of biochronological zones for Ordovician and Silurian time. Such sequence of zones to provide necessary time control for exploration of natural resources of Ordovician and Silurian rocks in northern and western Canada

610025 Surface resistivity surveys

Obj.: To determine the usefulness of surface resistivity techniques as a means of locating aquifers in unconsolidated (Quaternary) deposits

610029 Quaternary geology and bedrock topography of the Riding Mountain area, Manitoba-Saskatchewan

Obj.: To gain areal information on Quaternary deposits and landforms; to outline buried bedrock topography including major buried valleys; to determine the Quaternary stratigraphy and history of the area; and to provide information pertinent to agriculture, forestry, groundwater and engineering construction

610030* Huronian rocks north of Lake Huron

Obj.: To revise the geology of the project area for publication at 1 or 2 miles to the inch, with particular emphasis on stratigraphy and correlation. In cooperation with ODM personnel, to correlate strata with those of other parts of the Huronian belt; and to standardize the nomenclature and definition of stratigraphic units

610037 Cobequid Mountains

Obj.: To define the bedrock geology and mineral occurrences of the Cobequid Mountains with particular attention to Silurian and Devonian stratigraphy and structure, as a means of elucidating the geologic history and as a guide to economic development

610039 Botwood map-area, Newfoundland

Obj.: To revise and interpret the stratigraphy and structure of an economically important area as a contribution to the economic development of Newfoundland

610042 Quaternary stratigraphic palynology (Terasmae, J QRG PG - X
of Canada Prof)

Obj.: To carry out palynological, paleobotanical, dendrochronological, limnological and sedimentological investigations of Quaternary deposits in order to: (1) provide a stratigraphic correlation and chronology of Quaternary deposits and events in various parts of Canada; (2) to reconstruct and determine the history of postglacial and sub-recent environments; (3) to establish standard pollen stratigraphic sequences for different regions in Canada; and (4) to improve existing palynological methods and techniques

610044* Diabase dykes of the Canadian Shield Fahrigr, WF CG PS - X
Frank, Kee
Mack, Sask
Man, Ont
Que, Nfld

Obj.: To extend knowledge of diabase dyke swarms in the Canadian Shield, their tectonic significance, palaeomagnetism, age relationships and their chemical and petrologic characteristics

610269* Petrographic examination of coking Cameron, AR CG CR 82 G, J X
coals from the Crowsnest coalfield,
Alberta and British Columbia Alta

Obj.: To determine the coking properties and to prepare seam profiles for correlation and environmental studies of coal seams from coking coals of the Crowsnest coalfield

610330 Cretaceous index fossils of sedimentary basins of western and Arctic Canada Jeletzky, JA ISPG WP - X

Obj.: To publish a series of fossil plates illustrating a selection of best known and most useful Cretaceous index fossils

610394 Schedule of Wells, NWT Belyea, Helen R ISPG SRS Mack 85;95;96;106 X

Obj.: To provide geological information, particularly formation tops, required by Department of Indian Affairs and Northern Development for publication in annual Schedule of Wells

620001 Operation Prince of Wales Christie, RL ISPG AI Frank 57 B,C,F,G;58 A-F;67 A,D, E,H;68 A-F X

Obj.: (a) Geological reconnaissance of the Precambrian rocks of Boothia Peninsula and region.
(b) Geological reconnaissance of the Paleozoic and younger rocks of the Boothia region.

620004 Kognak River area, N.W.T. Eade, KE CG PS Kee 65 G E $\frac{1}{2}$,H W $\frac{1}{2}$ X

Obj.: To establish the stratigraphy and structure of the Hurwitz Group and its relationship to nearby rock sequences, as an aid to economic development in the region

620010 Quaternary reconnaissance, north-eastern District of Mackenzie Blake, W Jr QRG RSP Mack 66 E,L,M;67 B; 76 E-P; 77 A,B X

Obj.: Reconnaissance mapping of glacial deposits, landforms, and other Quaternary features in order to provide descriptive data on the Quaternary geology and geomorphology of the region and to determine the chronology of events during deglaciation

620012 Geochemical and petrologic study of Yellowknife volcanic rocks Baragar, WRA CG PS Mack 85 J/8,9 X

Obj.: To provide composition, petrographic, and stratigraphic data from which the volcanic character, eruptive history, and characteristic composition may be obtained

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
620017*	Big Bend map-area, B.C.	Wheeler, JO	CG	CPM	BC	82 N W $\frac{1}{2}$, M E $\frac{1}{2}$	X	
	Obj.: 1. Within the map-area to arrive at understanding of the Late Precambrian and Palaeozoic stratigraphy. 2. To undertake an analysis of the tectonic evolution of the northern Selkirk Mountains with respect to the Shuswap metamorphic complex in the western part of the area and to the Rocky Mountains structure in the northeastern part of the area. 3. To relate the distribution of mineral deposits in the area to the original tectonics as a guide to exploration for minerals. 4. To display the results on a map at 1 inch to 4 miles.							
620018	Geological survey of NTS 82 J W $\frac{1}{2}$ (Kananaskis Lakes, W $\frac{1}{2}$)	Leech, GB	CG	CPM	BC	82 J W $\frac{1}{2}$ Alta		X
	Obj.: To determine and interpret the stratigraphic, structural and economic geological features of the region for publication at 1 inch to 2 miles and/or 1 inch to 1 mile as required							
620019	Prince Rupert-Skeena map-areas	Hutchison, WW	CG	CPM	BC	103 I W $\frac{1}{2}$, J E $\frac{1}{2}$	X	
	Obj.: To determine the regional geologic relationships and the origin and evolution of the metamorphic and plutonic rocks if part of the Coast Mountains							
620023	Triassic stratigraphy and petrology between Smoky River and Crowsnest Pass	Gibson, DW	ISPG	MS	BC	83 C,E,F; 82 G,J,O Alta	X	
	Obj.: To provide data on the stratigraphic relationships and correlation of the Triassic strata; their mega- and microfaunal content; their megascopic and petrographic features; conditions of deposition; their potentialities as source rocks for oil and gas and possible suitability as reservoirs for hydrocarbons; and assess the potentialities of the gypsum occurrences							
620038	Seismic - Oak Ridge Moraine	Hobson, GD	EG	SM	Ont	30 M,N;31 C,D	X	
	Obj.: To investigate thickness and nature of overburden and topography of bedrock. To determine easterly extent of the moraines. To determine structure in bedrock and differentiate bedrock lithology.							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
620039	Quaternary geology, Chaudière River region, Quebec	Gadd, NR	QRG	RSP	Que	21 L/2,6,7,11,12	X	
	Obj.: To map, describe and explain the Quaternary deposits and landforms in order to: (1) contribute to knowledge of glacial history and other aspects of Quaternary chronology of the area; (2) elucidate the nature and origin of placer gold deposits applicable to engineering, agriculture, forestry and groundwater							
620052*	Engineering geology and mapping, Welland Canal	Owen, EB	QRG	EGG	Ont	30 M/3g/3b,L/14g	X	
	Obj.: (1) To provide engineering geology advice as required by the St. Lawrence Seaway Authority during construction of the new Welland Canal; and (2) to map, describe and explain the surficial and bedrock features of the above map-areas with particular reference to engineering geology							
620056*	Audio frequency studies	Ahrens, RH	EG	EM	Man,Ont	Pts of 62 H, 31 G	X	
	Obj.: To design, construct, bench and field test audio and sub-audio frequency resistivity equipment to measure the resistive and reactive components of soils and rocks over a frequency range of 0.3 to 1000 cps.							
620265	Diffusion studies in super-critical water	Currie, KL	CG	Pet	-	-	X	
	Obj.: To elucidate the role of water in igneous and metamorphic petrology							
620288	Element abundances of the Canadian Shield	Eade, KE Fahrig, WF	CG	PS	-	-	X	
	Obj.: To determine the average chemical composition of the surface crystalline rocks of the Canadian Shield, to examine the variation in element abundances within the Shield and to relate these variations to the geological evolution of the various parts of the Canadian Shield							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act.	Inact.
620297	Middle Devonian Ostracoda, southwestern Ontario	Copeland, MJ	CG	EP	Ont	40 P/4	70-71	70-71
	Obj.: Stratigraphic distribution of Ostracoda in drill cores of the Hamilton Group, southwestern Ontario. Description of new microfauna found (if any). Environmental and evolutionary trends of the fauna will be determined if possible							
620308	Electron probe microanalysis	Plant, AG	EGG	M	-	-		
	Obj.: Operation of an electron (Ser) probe microanalysis laboratory for the purpose of contributing to the knowledge of Canadian mineralogy and mineral deposits through: (a) direct mineralogical research; (b) research and development of methods and concepts of electron microanalysis; and (c) provision of microanalysis of minerals in support of other G.S.C. projects							Undecided
620317*	Cretaceous subsurface studies in northeastern British Columbia	Stott, DF	ISPG	MS	BC	93 I,O,P;94 A,B;G-K,N-P		X
	Obj.: To establish the stratigraphic relationships of surface and subsurface Cretaceous successions; to describe the subsurface stratigraphic succession and to provide data on their lateral variations and for an evaluation of the economic potential							
620318	Middle Ordovician stratigraphic and faunal study, southern Alberta and southeast British Columbia	Norford, BS	ISPG	WP	BC	83 C; 82 J,N,O		X
	Obj.: Description of sub-Mount Wilson formations and faunas				Alta			
630002	Bathurst Island (Operation Bathurst Island)	Kerr, JW	ISPG	AI	Frank	68 G,H;69 A,B;78 H;79 A		X
	Obj.: To improve the understanding of the stratigraphy and structural geology of Bathurst Island; the purpose primarily is to aid in the evaluation of the economic potential of the region, which is an important one for petroleum exploration							
630003	Operation Grant Land - NE Ellesmere Island and NW Greenland	Christie, RL	ISPG	AI	Frank	120 C-G;340 C-F,H		X
	Obj.: To obtain a better understanding of the geological features of an orogenic belt extending across northeastern Ellesmere Island to adjacent Greenland							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
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630006	Quaternary reconnaissance, north-west Baffin Island	Craig, BG	QRG	RSP	Frank	Pts 47 C-H, 48 A-E, H, 58 A, D	X	X
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Obj.: Reconnaissance geological study and mapping of the surficial deposits and glacial features of that part of Baffin Island west of the 80th meridian, and adjacent small islands

630009	Dubawnt Group sediments, N.W.T.	(Donaldson, JA, Prof)	CG	PS	Kee Mack	55 NW; 56 SW; 65 N; 66 S; 75 NE; 76 SE	X	X
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Obj.: To define the units within this group and to determine the provenance, dispersal patterns and depositional environments of its constituent sediments

630016*	Coast Mountains project	Roddick, JA	CG	CPM	BC	92 F NE $\frac{1}{4}$, G W $\frac{1}{2}$, J, K, L NE $\frac{1}{4}$, M, N; 93 D; 102 P; 103 A, G, I W $\frac{1}{2}$, J, N, P W $\frac{1}{2}$	X	X
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Obj.: A geological reconnaissance of the Coast Mountains between southeast Alaska and Vancouver for publication on a scale of 1 inch equals 4 miles. The investigation is expected to reveal the main events in the geological history of the Coast Crystalline Belt and to develop an understanding of the processes governing the formation of plutonic rocks in such orogenic belts.

630017	Operation Liard	Taylor, GC	ISPG	SG	BC	94 F E $\frac{1}{2}$, G, J, K, N, O	X	X
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Obj.: To establish the stratigraphic framework of the northern Rocky Mountains and in conjunction to establish a conceptual model of the structural deformation of these rocks

630019	Quaternary geology, Vernon map-area W $\frac{1}{2}$	Fulton, RJ	QRG	RSP	BC	82 L W $\frac{1}{2}$	X	X
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Obj.: To gather areal information regarding Quaternary geology; to determine the chronologic sequence of Quaternary events and environments in the region; to provide data applicable to agriculture, forestry, engineering, and groundwater

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
630021*	Mississippian physical stratigraphy, sedimentology, and correlation	Macqueen, RW	ISPG	PS	BC	-	X	
	Obj.: To determine the stratigraphic relationships and correlation of these strata including formational subdivision; their depositional diagenetic, and geochemical history; their macrofaunal and faunal content; and their potentialities as source rocks for oil and gas and their suitability as reservoirs for these fuels				Alta			
630025*	Geological investigations across the boundary between the Churchill and Superior tectonic provinces	Bell, CK	CG	PS	Man	63 NE	X	
	Obj.: To establish the stratigraphy and structure of sedimentary and volcanic rocks in this region and their relationships to adjacent gneisses and intrusive rocks; and provide data on the mineral deposits of the region with emphasis on the nature of their host rocks and the possibility of genetic relationship to the boundary between the tectonic provinces							
630028	Nakina geologic-magnetic study	Sangster, DF	EGG	MD	Ont	42 L/10,11	X	
	Obj.: To correlate the detailed geological features with the micromagnetic properties of iron-formation on the Anaconda property north of Nakina, Ontario							
630031*	Multispectral photography	Slaney, VR	EG	RSM	-	-	X	
	Obj.: Development of multispectral aerial photography, including high altitude and satellite photography, and methods of interpretation as a means of providing geological information							
630032	Opocopa map-area, Quebec-Labrador	Jackson, GD	CG	PS	Que	23 B E ₂ Nfld	X	
	Obj.: To delineate the structure and stratigraphy and to relate the mineral (iron) deposits to these parameters; to correlate if possible the metamorphosed strata of the area with those of lower metamorphic grade in the Labrador Trough							
630035	Port aux Basques	Gillis, JW	CG	AELAM	Nfld	11 O	X	
	Obj.: To determine the structure, age and geological history of the rocks and the size, grade mode of occurrence, origin and potential of the mineral deposits, in order to aid mineral development of the area							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact.
630037*	Geology of Canadian nickel and platinum group deposits	Eckstrand, RO	EGG	MD	-	-	X
630039	Geology of vanadium deposits in Canada	Rose, ER	EGG	MD	-	-	X
630049	Electrical rock properties	Collett, LS	EG	EM	-	-	X
630341	Paleontology and stratigraphy of the Carboniferous and Permian of northern Yukon	Bamber, EW	ISPG	WP	Mack Yk	116 B, C E ₁ ² , G-J, K E ₁ ² , N E ₁ ² , O, P; 117 A-D	X

Obj.: To carry out comprehensive research on the geology of nickel and platinum group deposits in order to provide a geological basis for exploration and assessment of nickel and platinum group potential in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of nickel and platinum group deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypotheses on geological environment, provenance, and genetic processes of nickel and platinum group deposits; and (5) determination of regions and geological units in Canada most favourable for the occurrence of each type of deposit.

Obj.: To carry out comprehensive research on the geology of vanadium deposits in order to provide a geological basis for exploration and assessment of vanadium potential in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of vanadium deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypotheses on geological environments, provenance, and genetic processes of vanadium deposits; and (5) determination of regions and geological units in Canada most favourable for the occurrence of each type of deposit.

Obj.: To study the electrical parameters including polarization phenomena of rocks, soils and sulphides. These electrical parameters will aid in the interpretation of electrical survey techniques.

Obj.: Stratigraphic and paleontological information obtained on Operation Porcupine will be assembled to present a comprehensive lithostratigraphic and biostratigraphic picture of Carboniferous and Permian rocks in the area. The report will include detailed petrographic and sedimentological information and will outline the faunal sequence of the area based on work by the paleontologists listed.

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
630349	Biostratigraphy of the Sooke and Carmanah Formations	Cox, RL	ISPG	WP	BC	92 B,C		X
	Obj.: (1) to describe and illustrate fossil pollen and spores from the formation; (2) to use these microfossils to correlate geological events within the formations; and (3) to discuss the paleoecology of the formations							
630356	Subsurface study of Triassic stratigraphy of NE British Columbia	Procter, RM	ISPG	PS	BC	93 I,O,P;94 A,B,G-K,N-P		X
	Obj.: To identify stratigraphically significant subdivisions of the interval; determine their distribution and inter-relationships; and deduce the sequence of geologic events which produced them. Attempt to find relationship between porosity development and facies							
630404	Magnetic gradient techniques	Hood, PJ	EG	MM	-	-		X
	Obj.: To assess the usefulness of measuring the vertical gradient in magnetic surveys and to develop the necessary theory for the interpretation of the results							
630415	Lower Cretaceous (Albian) stratigraphy of Peel and Snake Rivers, Yukon Territory	Chamney, TP	ISPG	WP	Mack-Yk	106;107;116;117		X
	Obj.: Detailed biostratigraphic subdivision of the Lower Cretaceous (Albian) rocks of the northern Yukon and Arctic Coastal Plain based on the foraminiferal faunas recovered from the critical stratigraphic sections exposed on Peel and Snake Rivers and described by Mountjoy and Chamney (GSC Paper 68-26). Such subdivision to provide a vital aid for the exploration of the petroleum resources of the Lower Cretaceous rocks of these regions and the western Arctic Islands.							
630434	Seismic-Beauceville	Hobson, GD	EG	SM	Que	21 L/2		X
	Obj.: To determine thickness and nature of overburden, to determine bedrock topography, to outline a preglacial drainage system into the Chaudiere Valley associated with placer gold deposits on the Gilbert River							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
630444	Petrological, chemical, and mineralogical study of White Creek granite, B.C.	Reesor, JE	CG	Pet	BC	82 F/16	X	
	Obj.: To study the mineral components and geochemistry of the various phases of White Creek batholith leading to an understanding of the origin and development of a series of granitic rock types common in this general region							
640004*	Quaternary reconnaissance, western Arctic Islands	Fyles, JG	QRG	RSP	Frank	Pts 49,59,69,78,79,88,89, 97,98,99,340,560	X	
	Obj.: To map and explain Quaternary deposits, landforms, and landscape processes in order to: (1) provide areal geological information; (2) determine Quaternary stratigraphy and history; and (3) document the nature and rate of landscape development processes. The project includes investigation of the Beaufort Formation.							
640010	Yellowknife and Goulburn rocks in the Contwoyto Lake area, N.W.T.	Tremblay, LP	CG	PS	Mack	75 E/11,14		X
	Obj.: To study the metamorphic rocks of the Yellowknife Group with particular reference to petrologic, stratigraphic and/or structural control of ore deposition and to study the stratigraphy of the Goulburn Group in this area for regional comparison and correlation. Publication scale, 1 in.-1 mile.							
640011	Itchen Lake map-area	Bostock, HH	CG	PS	Mack	76 E W½; 86 H E½		X
	Obj.: To outline the limits of gold-bearing rocks of the Yellowknife group; to determine the age and structural relations of the Yellowknife rocks and to ascertain the origin of the gold deposits; to complete mapping and structural interpretation of the Proterozoic outlier at "Rockinghorse Lake" to assist in correlation between the Epworth and Goulburn groups							
640013	Mt. Haldane and Dublin Gulch map-areas	Poole, WH	CG	CPM	Yk	105 M/13; 106 D/4		X
	Obj.: An investigation of the bedrock geology of map-area 105 M/13 and as much of 106 D/4 as is feasible, as an aid to economic development in Keno Hill mining camp							

Project Number Title Project Leader Div. Sect. Prov. NTS

640016 Operation Keno, surficial geology phase Hughes, OL QRG RSP Yk 105 M N $\frac{1}{2}$;106 D/1-4 X

Obj.: To study and map the surficial deposits and related physical features; to differentiate deposits of successive glacial advances, to determine the Quaternary history of the area as displayed in the deposits

640019 Manning Park Wheeler, JO CG CPM BC Pt 92 H X

Obj.: Study of geology of Cascade Mts. S of latitude 49°15' - and east of Hozameen Fault with special emphasis on structure, to determine the stratigraphy and structure of the Dewdney Creek and Pasayten Groups, their mutual relations and those to the Hozameen Group on the west and the Eagle granodiorite on the east, and to determine the time at which the rocks were deformed

640024 Conodont biostratigraphy of the Waterways Formation, northeastern and central Alberta Uyeno, TT ISPG WP Alta 73 M;74 D,E;83 G,J,O;84 B X

Obj.: To determine whether condodonts can establish the exact age and correlation of the Waterways and Beaverhill Lake Formations, northeastern and central Alberta

640027 Surficial geology, Kananaskis Lakes Stalker, AM QRG RSP Alta Pt 82 J X

Obj.: To map, describe and explain the Quaternary deposits and landforms in order to elucidate the glacial history of the region and to provide areal geological knowledge including data pertinent to groundwater, engineering, and forestry

640029 Quaternary geology, Duck Mountain, Manitoba-Saskatchewan Klassen, RW QRG RSP Sask 62 N Man X

Obj.: To gain areal information on Quaternary deposits and landforms; to outline buried bedrock topography including major buried valleys; to determine the Quaternary stratigraphy and history of the area; and to provide information pertinent to agriculture, forestry, groundwater, and engineering construction

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
640032	Devonian biostratigraphy of Lake Manitoba-Lake Winipegosis region	Norris, AW	ISPG	PS	Man	62 I W $\frac{1}{2}$, J; 63 B W $\frac{1}{2}$, C, F S $\frac{1}{2}$	X
640036*	Lake Panache and Collins Inlet areas, Ont.	Frarey, MJ	CG	P	Ont	41 H/14, I/3	X
640039	Morin anorthosite, Quebec	Emslie, RF	CG	PS	Que	Pts 31 G-J	X
640040	Ordovician and Silurian microfaunas, Anticosti Island	Copeland, MJ	CG	EP	Que	12 E, F; 22 H/16	X
640043	Geological study of the Antigonish Highlands	Benson, DG	CG	AELAM	NS	11 E/8, 9, 16	X

Obj.: To map, systematically collect and study the Devonian rocks and megafossils of the Manitoba outcrop belt for establishing more precise correlations of the Manitoba sequences with other areas and the subsurface

Obj.: To revise the stratigraphy and structure of the Huronian succession as previously shown (GSC maps 220A and 221A); to determine the nature of the Grenville Front within the area and the effect of metamorphism on the Huronian formations; and to determine the metamorphic and structural history and the mineral potential of the map-areas

Obj.: To determine the nature of the differentiation and the processes leading to development of the present form of the Morin intrusion - to include a map of the intrusion and surroundings

Obj.: Stratigraphic zonation of Ordovician and Silurian strata based on their contained microfauna

Obj.: To determine the stratigraphy, structure and tectonic history of the sedimentary and igneous rocks of the Antigonish Highlands and to provide up to date geological maps and reports as an aid to mineral exploration and the economic development of the area

Project Number Title Project Leader Div. Sect. Prov. NTS

640048* Study of mineral collecting areas of interest to rockhounds and tourists Stenson, Mrs. AP EGG M - - X

Obj.: To meet the needs of non-professional Canadian and foreign visitors for information on the accessibility, location, and nature of occurrences of minerals and rocks of interest to rockhounds

640049 Marine Seismic - Gulf of St. Lawrence Hobson, GD EG SM Que 12 SE, NE; 11 NE; Nfld 2 SW, NW, NE; 1 NW X

Obj.: Conventional marine refraction seismic survey to determine thickness and attitude of sediments overlying crystalline basement. To result in an interpretive seismic map of eastern Canadian Maritime with the water removed.

640058 Whalesback comprehensive mine study Whitmore, DRE EGG MD Nfld 12 H X

Obj.: To gain insight into factors affecting the formation and occurrence of similar ore bodies by making a comprehensive study of geological, geophysical and geochemical features of the Whalesback Mine as it is mined out

640125* General metallogeny of Canada Leech, GB EGG MD - - X

Obj.: To study metallogenic concepts pertaining to the geological and tectonic regions of Canada as a whole in order to determine relationships in the distribution of economic minerals to their geological environments

640382 Economic Geology Report Series No. 1, 5th Edition Douglas, RJW ADM SP - - X

Obj.: To prepare a revision of Geology and Economic Minerals of Canada

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
640402*	Certification of bedded and non-bedded mineral deposits	Whitmore, DRE	EGG	MD	-	-	X	
	Obj.: To act on behalf of the Director of the Geological Survey in the certification of mineral deposits as bedded or non-bedded for income tax purposes							
640417	Computer-oriented research on mineral deposits	Agterberg, FP	EGG	GP	-	-	X	
	Obj.: To determine by mathematical models the distribution of economic elements in mineral deposits in order to improve methods of sampling, and of ore reserve calculation							
640419*	Studies of Cretaceous stratigraphy of the Plains of Saskatchewan, Manitoba, and eastern Alberta	Price, LL	ISPG	MS	Alta Sask Man	-	X	
	Obj.: To improve knowledge of the Cretaceous rocks of the central and eastern Plains using all available subsurface and outcrop data							
640420	Geological observations at shafts of potash mines, Saskatchewan	Price, LL	ISPG	MS	Sask	62 K/5,12,L/16;72 O/16, P/13;73 B/1-3	X	
	Obj.: To record geological data and obtain fossils from the rocks exposed in the walls of large-diameter potash mine shafts in the eastern Plains							
640426	Development and supervision of geochemical data bank (Geodat)	Dawson, KR	GIP	Adm	-	-	X	
	Obj.: To develop and supervise the operation of a geochemical data bank (Geodat) as a computer based geoscience research, storage and retrieval facility							
640427	Windy Point Reef, Great Slave Lake	Norris, AW	ISPG	WP	Mack	85 F E $\frac{1}{2}$, G W $\frac{1}{4}$	X	
	Obj.: To study in detail the lithology and faunas of the Middle Devonian Presqu'ile Reef and adjacent beds							

650003	Cornwallis and adjacent smaller islands	Thorsteinsson, R	ISPG	SRS	Frank	58 F,G;68 E,H			X
	Obj.: (a) To improve the understanding of the age, structure, sequence, relationship, thickness, and origin of bedrock formations with a view to helping, (b) assess the size, grade, mode of occurrence, origin, and potentialities of any fuel or mineral deposits that may occur; and (c) improve the knowledge and understanding of the morphology of the Silurian and Devonian ostracoderms of Cornwallis Island, thus aiding in the establishment of a more useful stratigraphic framework for the region, and contributing to objective (a)								
650007*	Ocean aeromagnetics	Hood, PJ	EG	MM	-	-			X
	Obj.: 1. To conduct high resolution aeromagnetic surveys over the Canadian continental shelves for the purpose of delineating sedimentary basins. 2. To obtain and study magnetic data over the ocean basins in order to shed light on the theories of magnetic imprinting of oceanic rocks, ocean-floor spreading, and continental drift								
650008*	Stratigraphy, sedimentology and correlation of the Nonacho Group, N.W.T.	McGlynn, JC	CG	PS	Mack	Pts 75 E,F,K			X
	Obj.: To define the sedimentology and stratigraphy of Nonacho Group and relationships of these rocks to surrounding igneous rocks as a contribution to regional correlation and geological history of the region								
650009	Petrologic and structural study of the McDonald Fault system south of Great Slave Lake	Reinhardt, EW	CG	PS	Mack	Pts 75 E;85 H			X
	Obj.: To describe and interpret the mylonites north and south of the McDonald Fault and their relationships to nearby Archaean and Proterozoic rocks; to estimate the order of magnitude and sense of horizontal and vertical components of movement along the McDonald Fault system; and to evaluate the possible correlation of the Yellowknife Group with highly metamorphosed rocks southeast of the McDonald Fault								

650010 Operation Selwyn Blusson, SL CG CPM Mack, Yk 105 A, H, I, P; 104 O; 95 D BC X

Obj.: To establish the stratigraphic sequence and determine the nature of abrupt facies changes in lower Paleozoic rocks of western Mackenzie and Selwyn Mountains, and to study the relationship and distribution of formations that are host to large base metal deposits, as a contribution to the economic development of the north

650012 Metallogenic study of the beryllium- Mulligan, R EGG MD Yk 105 A, B; 104 O, P BC X

Obj.: To investigate occurrences of economic minerals, their relationship to the geological environment, and the distribution of specified elements in igneous and other rocks and in stream sediments of the area

650013 Quaternary geology, Aishihik Lake Hughes, OL QRG RSP Yk 115 H X

Obj.: To map and explain the Quaternary geology and geomorphology of Aishihik Lake area with particular reference to limits of glaciation (including the outermost glacial limit) and other aspects of Quaternary history in order to: (1) improve knowledge of the glacial history of southwestern Yukon; and (2) provide areal geological information

650015 Geology of the Mt. Edziza volcano Souther, JG CG CPM BC Pts 104 G/7, 10, 15, 16 X

Obj.: A detailed investigation of the geology, petrology and petrochemistry to determine the history and processes of evolution and relationship to contemporaneous plutons in the Stikine region

650016 Lardeau W $\frac{1}{2}$ map-area, B.C. Wheeler, JO CG CPM BC 82 K W $\frac{1}{2}$ X

Obj.: As part of the N.A.C. Southern Cordilleran structure project: (1) to arrive at an understanding of Late Precambrian and early Palaeozoic stratigraphy west of Purcell anticlinorium; (2) to undertake an analysis of the Tectonic evolution of the Selkirk Mountains - particularly with respect to the sequence and significance of several generations of folds locally established in the Kootenay Arc; and (3) to relate the distribution of mineral deposits in the area to regional tectonics as a guide to exploration for minerals. To produce map at 1 inch to 4 miles and accompanying report

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act: Inact. 70-71 70-71
650017	Seymour Arm vicinity	(McMillan, WJ)	CG	CPM	BC	Pts 82 M/2,7	X
	Obj.: A study of the structure in the pegmatite-poor envelope of schist, gneiss, and quartzite on the west side of Frenchman's Cap gneiss dome and also within the core of the dome. To determine the mutual relations of southwesterly trending folds and those trending northwesterly, and whether the core contains older structure possibly related to mobilize basement. To be illustrated by geologic map published at 1 inch to 1 mile.						
650020	Quaternary geology, Columbia River project reservoirs	Fulton, RJ	QRG	RSP	BC	Pts 82 E,F,K-N,83 C,D	X
	Obj.: To gather areal information regarding Quaternary geology in advance of hydroelectric development; to determine chronologic sequence of Quaternary events and environments; to provide data applicable to engineering, groundwater, forestry, and agriculture. Reservoir maps to be published on 1:50,000 scale.						
650023	Operation Bow-Athabasca	(Price, RA)	ISPG	SG	BC,Alta	-	X
	Obj.: To complete the systematic reconnaissance geologic study of the Rocky Mountains south of Lat. 53°N, to obtain information on the character, structure, distribution, age, stratigraphic relationships, and origin of the bedrock in this area, and other geological data that are required to evaluate the mineral potentialities of the area and to assist exploration for oil, gas, coal and other mineral deposits in this and adjacent areas						
650024*	Cambrian biostratigraphy of the Canadian Cordillera	Fritz, WH	ISPG	WP	<u>Mack,Yk</u> <u>BC,Alta</u>	-	X
	Obj.: To identify and describe Cambrian fossils from the Canadian Cordillera, ascertain their relative stratigraphic positions, and provide faunal correlations for their enclosing strata						
650027*	Quaternary of southern Alberta	Stalker, AM	QRG	RSP	Alta	-	X
	Obj.: To gain knowledge of Quaternary stratigraphy, chronology, environments and climates in southern Alberta						

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
650030*	Palynological studies, central Saskatchewan	Mott, RJ	QRG	PG	Sask	-	X
	Obj.: To provide information on late-glacial and postglacial vegetational and climatic changes and geochronology, including changes in the forest-grassland relations						
650037*	Postglacial uplift of Huron Basin	Lewis, CFM	QRG	RSP	Ont	-	X
	Obj.: Geological assessment of changes in lake level and of evidence of tilt of lake basin during the past few thousand years (approximately 6,000 years), through detailed mapping and investigation of present and past shoreline forms and deposits						
650038	Quaternary geology, Stratford-Conestogo	(Karrow, PF Prof)	QRG	RSP	Ont	40 P/7,10	X
	Obj.: To map, describe and explain the Quaternary deposits and landforms in order to provide: (1) areal information; (2) knowledge of the Quaternary stratigraphy and chronology of the region; and (3) background information in support of soils mapping in Waterloo County as well as data applicable to engineering, groundwater, etc.						
650044	Volcanic studies in the Noranda region, Ontario-Quebec	Baragar, WRA	CG	PS	Ont Que	32 D S $\frac{1}{2}$,D NW	X
	Obj.: To provide compositional, petrographic and stratigraphic data from which the volcanic character, the chemical evolution, the eruptive history and characteristic composition may be obtained						
650050	Metallogenic maps and reports, District of Mackenzie	Thorpe, RI	EGG	MD	Mack	-	X
	Obj.: To contribute to a metallogenic map of Canada (Project 640125) and to publish more specific information concerning metallogenesis in the District of Mackenzie						

Project Number Title Project Leader Div. Sect. Prov. NTS

650056* Geology of lead and zinc deposits in Canada Sangster, DF EGG MD - - X

Obj.: To carry out comprehensive research on the geology of lead and zinc deposits in order to provide a geological basis for exploration and an assessment of lead and zinc potential in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of lead and zinc deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypotheses on geological environment, provenance, and genetic processes of lead and zinc deposits; (5) determination of regions and geological units in Canada most favourable for the occurrence of each type of deposit

650131 Quaternary geology, Snag-Kluane Lake Rampton, V QRG RSP Yk 115 F E $\frac{1}{2}$, G, J, K E $\frac{1}{2}$ X

Obj.: To map, describe and explain the glacial deposits extending from the snout of Klutlan glacier to the limits of glaciation north of Snag, with particular reference to the development of geomorphic and other criteria for differentiating the deposits and landforms relating to the several glaciations known to have affected the area in order to: (1) differentiate the deposits of the area according to the respective glacial stages and sub-stages during which they were deposited; and (2) develop a chronologic framework within which glacial deposits of adjacent parts of Yukon can be classified on a reconnaissance basis

650288 Aiken Lake, B.C. Irvine, TN CG Pet BC 94 C W $\frac{1}{2}$, D E $\frac{1}{4}$ X

Obj.: To describe the petrology of the Ultramafic Complex in the Lay Range with the purpose of defining its differentiation history and mode of emplacement

650438* Geochemistry of gold deposits Boyle, RW EGG SP - - X

Obj.: To compile available data on geochemistry of gold and particularly on the gold deposits of Canada

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
650466*	Isotopic study of mica-bearing rocks yielding anomalous K/Ar 'ages'	Wanless, RK	CG	G	Man, Que Nfld	63 NE; 32 C,D,G,I; 23 H; 21 M; 13 I,J	X
	Obj.: To undertake detailed isotopic investigations in regions where 'anomalous' K/Ar age relationships have been found in order to establish the true age of the rocks, the time when the isotopic systems were disturbed, and to gain an understanding of the natural processes responsible for the disturbance						
650470	Ottawa bedrock investigations	Sanford, BV	CG	AELAM	Ont	31 G/5	X
	Obj.: To investigate temporary bedrock exposures in the Ottawa area as they become available in order to add to geological data of the region and as an aid to answering queries from the public						
660001	The Malton gneiss along the Rocky Mountain Trench near Valemount, B.C.	(Giovannella, CA)	CG	CPM	BC	Pts 83 D	X
	Obj.: To determine the structural and metamorphic history of the Malton Gneiss; whether it developed from transformation of rocks <u>in situ</u> or if it is an exotic mass introduced its present position						
660002	Atlin Horst project	Monger, JWH	CG	CPM	Yk, BC	105 C,D; Pts 104 J,K,M,N	X
	Obj.: 1. To establish a reference section for Late Palaeozoic rocks in northern British Columbia. 2. To determine relationships between Permian, pre-Permian and post-Permian rocks in this area. 3. To determine the structural style of these rocks in the 'Atlin Horst'.						
660003	Harrison Lake, East, B.C.	(Lowes, BE)	CG	CPM	BC	Pts 92 H/5,12	X
	Obj.: To determine if the Cascade structural belt extends east of Harrison Lake and north of Fraser River. To recognize the principal structural elements of the Cascade structural belt and compare their geometry with that established south of Fraser River; to ultimately understand their metamorphic and structural evolution.						

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act.	Inact.
660005	Tavani map-area, Keewatin Obj.: To determine the structure, stratigraphy and metamorphism of the sedimentary and volcanic assemblage of Tavani map-area with particular emphasis on the petrology and mineral potential of the volcanic rocks	Heywood, WW	CG	PS	Kee	55 K	X	
660006	Granite studies in the Ennadai-Rankin Inlet Region Obj.: To classify the granitic rocks according to age, geological and chemical nature, geophysical parameters where available and to relate them to the regional geology and mineral deposits	Davidson, A	CG	PS	Kee	Pts 55 W $\frac{1}{2}$, 65 E $\frac{1}{2}$	X	
660007	Studies of the Coppermine River volcanic rocks, N.W.T. Obj.: To determine the total composition, variation in composition, and stratigraphy of the Coppermine River volcanic succession and its relationships to Mackenzie dyke swarm and Muskox Complex. To provide data of assistance to prospecting.	Baragar, WRA	CG	PS	Mack	Pts 86 N, O	X	
660009	A sedimentological and stratigraphic study of the Great Slave and Et Then Groups in the East Arm fold belt, Great Slave Lake Obj.: To refine existing stratigraphic descriptions and relationships of the sedimentary and volcanic rocks to determine source regions and dispersal patterns in the sedimentary fill; to determine depositional environments and to reconstruct the Palaeogeographic history of the sedimentary basin	Hoffman, PF	CG	PS	Mack	Mainly 75 L	X	
660011	The interrelation of the Archaean volcanic stratigraphy and mineral deposits of the Kirkland Lake area Obj.: To determine the stratigraphic framework, volcanic history and mineral deposit relationships in the Kirkland Lake area, as an integral part of a larger study by Dr. A. Goodwin of the Timmins-Kirkland Lake - Noranda area	(Ridler, RH)	CG	PS	Ont	42 A	X	

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
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660012	Volcanic studies in the Timmins-Kirkland Lake-Noranda area	(Goodwin, AM Prof.)	CG	PS	Ont	32 D;42 A	X	
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Obj.: A study of Archaean volcanic belts to determine the stratigraphic framework, volcanic history and relation to mineral deposits. Scales as appropriate.

660013*	Operation Torngat	Taylor, FC	CG	PS	Que Nfld	23 P; 24 E $\frac{1}{2}$; 25 A; 14 W $\frac{1}{2}$; 13 M,N,O	X	
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Obj.: To determine and interpret the overall geological environment of the area east of longitude 68° and north of latitude 55° in order to ascertain its geological history and assess its mineral potential

660014	Michikamau anorthosite, Labrador	Emslie, RF	CG	PS	Que Nfld	Pts 23 I E $\frac{1}{2}$, 13 L W $\frac{1}{2}$	X	
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Obj.: To determine the mode of origin, and geological setting of the Michikamau intrusion and its implications as to mineral potential

660015	A structural metamorphic and petrological study of the Naskaupi and older fold belts of the Grenville and Nain provinces	(Williams, FMG)	CG	PS	Nfld	13 K E $\frac{1}{2}$	X	
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Obj.: To determine the nature of the Grenville front in the Snegamook E $\frac{1}{2}$ area and the relationship between the Nain and Grenville provinces along it. To determine the structural, metamorphic and petrological changes resulting from the Grenville orogeny.

660019	Geological study of the Antigonish Basin	Benson, DG	CG	AELAM	NS	11 F/12,13;pts 11 F/11,14	X	
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Obj.: To determine the stratigraphy of the Antigonish Basin and the stratigraphy and structure of subsediment rocks underlying George Bay. The results will provide a better understanding of the Antigonish carboniferous basin, be an aid to petroleum exploration and permit evaluation of various offshore methods and techniques

Project Number Title Project Leader Div. Sect. Prov. NTS

660020* Structural and palaeomagnetic fabric of the Mackenzie Arc Norris, DK ISPG SG Mack Yk 106;107;116;117 X

Obj.: The role of the Mackenzie Arc in the depositional and structural history of the western Interior Plains and Mackenzie Mountains as it may have influenced the temporal and spatial relations of stratigraphic and structural traps in the area

660026* Conodont biostratigraphy of Lower and Middle Devonian strata of southwestern Ontario Uyeno, TT ISPG WP Ont 40 I,J,P X

Obj.: To establish conodont zonations of Devonian strata of southwestern Ontario, to facilitate their correlations with other sequences, such as those of the New York standard, Hudson and James Bay Lowlands, and Manitoba

660030* Sedimentology and morphology of eskers McDonald, BC QRG EGG - X

Obj.: Map and describe eskers, and associated features in order to gain fundamental information regarding their classification, form, sedimentology and origin through detailed study of their morphology, internal structure, lithology, relation to nearby overburden, environment of formation, and their economic implications

660031 Quaternary geology of Peace River Reservoir area Rutter, NW QRG RSP BC Pts 93 N,O;94 B,C,F X

Obj.: Reconnaissance of Quaternary geology of Peace, Parsnip and Finlay Valleys in an advance of flooding to determine chronologic sequence of Quaternary events; to study geomorphic evolution of valleys; to gather areal information including data applicable for engineering and land capability inventory

Project Number Title Div. Sect. Prov. NTS

660032 Quaternary geology and geomorphology of Whitecourt area, Alberta St-Onge, DA QRG RSP Alta 83 J X

Obj.: To gather areal information concerning Quaternary (including geomorphic features) concentrating particularly on collection and presentation of data on surficial materials and landforms for forestry; to provide data applicable to engineering, groundwater and other fields. To contribute to knowledge of the Quaternary stratigraphy and chronology of the region.

660033* Quaternary geology and geomorphology of the Assiniboine River Valley and its tributaries Klassen, RW QRG RSP Sask 72 I; pts 62 F,G,K,N Man X

Obj.: To map, describe, and explain the Quaternary deposits and landforms within and adjacent to Assiniboine River Valley and its tributaries in order: (1) to reconstruct the Quaternary stratigraphy and geomorphic history of the valley system, and (2) to provide background information applicable to engineering, groundwater, and land resource development

660035* Quaternary geology, Sherbrooke McDonald, BC QRG RSP Que 21 E X

Obj.: To map, describe and explain the Quaternary deposits and landforms in order to: (1) determine the sequence of events and environments involved in glaciation and deglaciation; (2) to elucidate the Quaternary chronology of the region; and (3) to gather areal data applicable to soils mapping, groundwater, engineering and mineral exploration

660040 Study of non-metallic vein minerals and wall-rock alteration, Cobalt camp Jambor, JL EGG M Ont 31 M;41 P X

Obj.: To contribute to the knowledge of Canadian mineralogy and mineral deposits through studies of non-metallic minerals associated with ore veins, and to apply that knowledge to the problem of locating and outlining new ore bodies

660042* Regional aeromagnetic - geologic correlation
Kornik, LJ
EG MM Mack 74 M-P;75 A-H; 64 X
Sask.
Man, Ont

Obj.: A regional study to correlate geology with magnetic patterns and anomalies by means of in situ magnetic susceptibility and remanent magnetism measurements of oriented samples

660043 Airborne INPUT surveys
Collett, LS
EG EM Alta Pts 82 I,P, 62 H; 62 P/1; X
Man, Ont 52 M/3,4, L/14; Pt 31 G

Obj.: To assess the usefulness of airborne INPUT electromagnetic surveys as an aid to geological mapping

660044 Sidewall sampler testing and evaluation
Wyder, JE
EG EM Sask, Man - X

Obj.: To accept delivery of, test, and learn to operate the GSC sidewall sampler; to provide sidewall sampling services as and where required

660050 Seismic - Rocky Mountain Trench
Hobson, GD
EG SM BC 82 J/4,G/13 X

Obj.: To investigate structure beneath the west edge of Rocky Mountain to determine presence of discontinuities and identify formations. If possible to prove or disprove whether the Rocky Mountain front and adjacent part of the Trench floor may be "unrooted".

660051* Seismic - Interior Plateau, B.C.
Hobson, GD
EG SM BC 82 NW;92 NE X

Obj.: To determine depth and shape of some major valleys and to determine stratigraphy and history of unconsolidated fill in these valleys

660052 Seismic - Winkler, Manitoba and Probersher, Saskatchewan
Hobson, GD
EG SM Sask 62 G,E X
Man

Obj.: To investigate use of amplitude and frequency characteristics of seismic waves in the study of groundwater problems and definition of overburden materials

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
660053	Seismic - Flin Flon, Manitoba	Hobson, GD	EG	SM	Man	63 K/13	X
	Obj.: To determine whether seismic reflection and refraction seismic techniques can detect interfaces between Precambrian rock units utilizing data from the deep bore-hole at Flin Flon						
660054*	Marine seismic - Great Lakes	Hobson, GD	EG	SM	Ont	30 NW;40 NE;41 SE,NW	X
	Obj.: To determine water-sediment interface, stratification within the unconsolidated sediments, bedrock topography and lithology if possible and stratification within bedrock						
660055	Seismic, Elliot Lake	Overton, A	EG	SM	Ont	41 J/7	X
	Obj.: To assess feasibility of using seismic techniques, particularly the "common depth point" method, to determine thickness of strata overlying uranium pay zone						
660478	Airborne E.M. analysis	Bhattacharyya, BK	EG	TGDA	-	-	X
	Obj.: To carry out research on the application of computer-oriented methods for quantitative interpretation of airborne electromagnetic data of various types						
660479	Testing field and office collections for radioactive and fluorescent minerals	Steady, HR	EGG	M	-	-	X
	Obj.: To detect possible sources of radioactive and fluorescent minerals by rapid examination of rock specimens collected by field officers						
660486	Stratigraphy of the Blairmore Group and Kootenay Formation, southern Foothills of Alberta, Bow River to Clearwater River	Ollershaw, NC	ISPG	SG	Alta	82 O/6,7,10 W $\frac{1}{2}$,11,14	X
	Obj.: Are closely related to the coal and oil/gas assessment and development of the area, and the main result of the project should be a description of the character (lithology and petrology) and stratigraphy of the rocks forming the Blairmore Group and Kootenay Formation, with an interpretation of rock units, facies relationships, source areas, tectonic significance and economic potential						

660494 Magnetotelluric investigations Slankis, JA EG EM Man, Ont Pts 62 H; 32 C,D,F,G, X
Que, NB 31 F,G, 21 E,O,G

Obj.: To investigate the possibility of detecting sulphide conductors, faults and shear zones using the magnetotelluric method in the audio and sub-audio frequency range

660503* Microplankton from the Upper Cox, RL ISPG WP Sask 72;73;62;63 X
Cretaceous of Saskatchewan and
Manitoba Man

Obj.: (1) Description of microplankton from selected Cretaceous strata in Manitoba and Saskatchewan.
(2) Description of an Upper Cretaceous phytoplankton reference section to serve as a foundation for correlation of Upper Cretaceous rocks by phytoplankton in Western Canada. (3) Correlation of Cretaceous stratigraphic sections of the Manitoba escarpment with subsurface sections of the potash shafts of Southern Saskatchewan.

660530 Mississippian subsurface geology Martin, HL ISPG PS Alta 83 B,C,F,G X
in west-central Alberta

Obj.: To subdivide the Mississippian rocks into stratigraphically significant units and determine their areal extent, thickness, lithologic character, structural configuration, and relationship to adjacent strata; to deduce the sequence of geologic events which produced them, and to explain the relationship between porosity development and facies

660547 Geochemistry of Canadian craters Currie, KL CG Pet - X

Obj.: To provide data on the mode of origin of the melt rocks (impact origin vs. volcanic origin) of Canadian craters

660552 Monograph of brachiopod family Norford, BS ISPG WP - X
Trimerellidae

Obj.: Description of morphology, taxonomy, ecology, and evolution of a family of Ordovician and Silurian brachiopods that in Canada is largely found in biohermal and biostromal carbonate rocks. Completion of project will assist in the biostratigraphic and paleoecological discrimination of Ordovician and Silurian carbonate rocks.

670002 Operation Bylot Jackson, GD CG PS Frank 27;37;38;48 X

Obj.: A reconnaissance geological survey of a previously unmapped area to describe and interpret the broad geological framework and outline areas of potential economic interest

670003* Anorthosite study Emslie, RF CG PS Que 13 NW;14 SW Nfld X

Obj.: To examine three large anorthosite intrusions between Michikamau Lake and Nain, Coast of Labrador for purposes of comparison with Michikamau intrusion (including mineral potential)

670004 Study of the Hurwitz Group in the eastern part of the Rankin-Ennadai Belt Bell, RT CG PS Kee 55 E,F,J,K,L;65 I;pts 65 G,H X

Obj.: To define the sedimentary units and their stratigraphic relationship and interpret their provenance, dispersal patterns and depositional environment as well as their structure and relations to the basement rocks. The economic potential of the Hurwitz group and surrounding rocks should be evaluated as part of this study.

670005 Nature of the Thelon Front, N.W.T. Fraser, JA CG PS Mack Pts 76 I,J,75 O E½ X

Obj.: To determine the nature of the Thelon Front by delineating the changes in lithology, metamorphic grade, and structure across the frontal zone, and to assess the occurrence and potential of mineral deposits in the area concerned

670006 Sedimentology of the Yellowknife Group, N.W.T. Henderson, JB CG PS Mack 85 J/8,9 X

Obj.: To provide a palaeoenvironmental interpretation of the Yellowknife Group sediments; to increase understanding of depositional mechanism of turbidites and associated sediments, and to study the transition from volcanism to sedimentation in Archean times. To provide criteria for future regional studies of the Yellowknife Group.

670011

Study of a Tertiary cauldrea complex, Bennett Lake, B.C. and Yukon

(Lambert, MS)

CG

CPM

Yk

BC

Pts 105 D/5;104 M/14

X

Obj.: To describe and interpret the petrography and structure of a circular volcanic complex and contribute to the understanding of volcanic processes in the Cordilleran region

670014*

Operation Winisk

Norris, AW

ISPG

PS

Kee,Man 54 A-G, K-M;

53 H N $\frac{1}{2}$, I,

Ont,Que J,O,P; 43 B,C,D E $\frac{1}{2}$;

42 M E $\frac{1}{2}$, N $\frac{1}{2}$ F-H, L E $\frac{1}{2}$,

N-P

X

Obj.: To study, map and interpret the bedrock geology of the Hudson Bay Lowlands; to determine the age, thickness, distribution and structure of the rocks for evaluating the economic potential of the area

670016*

SW Ellesmere - W. Devon Islands (Operation Grinnell)

Kerr, JW

ISPG

AI

Frank

49 B,C;58 G,H;59 A,B,

D;69 A

X

Obj.: To improve the understanding of the stratigraphy and structure of the region, which is a key area for information in both of these fields; a primary purpose is to aid in evaluation of the resource potential - particularly petroleum - of this part of the north

670018

Baffin Island - Foxe Basin - Melville Peninsula (Operation Foxe Basin)

Trettin, HP

ISPG

AI

Frank

36 N,O;37 A-C,F,G;47 A,D

X

Obj.: To obtain an improved understanding of the stratigraphy, structures, and historical geology of the lower Paleozoic sedimentary rocks of the Foxe Basin region with a view particularly to evaluating the petroleum potential of the region

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
670019	Stratigraphy, structure, and carbonate petrography of the Marble Canyon Formation in the Marble Range, Cariboo District, B.C. Obj.: To clarify the understanding of the stratigraphy, structure, and carbonate petrology of the Marble Canyon Formation	Trettin, HP	ISPG	AI	BC	92 P/4	X
670021	Conodont biostratigraphy of Middle and Upper Devonian strata of southern and central Manitoba	Uyeno, TT	ISPG	WP	Man	62 J,K,N;63 C	X
670024	Obj.: To establish conodont zonations of Middle and Upper Devonian strata of southern and central Manitoba, to facilitate their correlations with other areas, such as the Alberta subsurface, and the James Bay Lowlands Chitinozoans and Acritarchs from the Hamilton Group (subsurface) of southwestern Ontario	(Legault, Miss JA)	CG	EP	Ont	40 P/4, J/16	X
670025	Obj.: Stratigraphic zonation of the Hamilton Group based on contained Chitinozoans and Acritarchs Operation Ringnes Islands	Stott, DF	ISPG	MS	Frank	59 C,F;69 C-G;79 H,F	X
670028	Obj.: To systematically map King Christian, Ellef and Amund Ringnes Islands, and to ascertain age, lithology, depositional and tectonic history, and economic potentialities Geology of rare earth deposits of Canada	Rose, ER	EGG	MD	-	-	X
670028	Obj.: To carry out comprehensive research on the geology of rare earth deposits in order to provide a geological basis for exploration and assessment of rare earth potential in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of rare-earth deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypotheses on geological environment, provenance, and genetic processes of rare earth deposits; (5) determination of regions and geological units in Canada most favourable for the occurrence of each type of deposit.						

670029* Geology of uranium and thorium deposits of Canada
Little, HW
EGG UP - -

Obj.: To carry out comprehensive research on the geology of uranium and thorium deposits in order to provide a geological basis for exploration and to provide a national authority on uranium and thorium potential in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of uranium and thorium deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypotheses on geological environment, provenance, and genetic processes of uranium and thorium group deposits; and (5) determination of regions and geological units in Canada most favourable for the occurrence of each type of deposit.

670031* Quaternary reconnaissance, southern Ellesmere Island
Blake, W Jr
QRG RSP Frank 38 G; 39 B,C; 49 A-D
59 A,D X

Obj.: Reconnaissance mapping of glacial deposits, landforms, and other Quaternary features in order to provide descriptive data on the Quaternary geology and geomorphology of the assigned area; to determine the chronology of events during glaciation and deglaciation; and to gather information on marginal fluctuations of glaciers, modern geologic processes, and changing environments

670032 Quaternary geology, Hudson Bay Lowland
Craig, BG
QRG RSP Man, Pts 54,53,43,42,32
Ont,Que X

Obj.: To map, describe and explain the Quaternary deposits and landforms in order to: (1) determine the nature and extent of the Quaternary deposits of the area; (2) to study the stratigraphic succession of the interglacial, glacial and postglacial deposits; (3) to determine the deglaciation history of the area; (4) to investigate the extent and chronology of the postglacial marine invasion; and to investigate the amount and the chronology of late Quaternary isostatic uplift throughout the area

670034 Bedrock topography and Quaternary stratigraphy, Virden, Manitoba
Klassen, RW
QRG RSP Man 62 F X

Obj.: Through subsurface investigations with the aid of drilling, sidewall sampling, and geophysics, to determine bedrock surface topography and trace the buried "Missouri" Valley and other buried drainage systems; to outline drift stratigraphy, particularly in buried valleys; and to gain knowledge of the glacial, interglacial, and preglacial history of the region

670035 Sand dunes and sand movement
(David,PP,Prof)
QRG EGG Sask Pts 72 K, 62 G
Man X

Obj.: To classify and describe dunes and dune areas; to determine the mode of formation of dunes, their environment of origin, chronology, rate of movement, and relationship to present and past wind directions

670037 Quaternary geology, southwest New Brunswick Gadd, NR QRG RSP NB Pts 21 B,G X

Obj.: To map and explain surficial deposits and landforms in order to provide: (1) areal and stratigraphic information concerning Quaternary (including geomorphic) features; (2) knowledge of glacial history and other aspects of Quaternary chronology; and (3) background information for groundwater investigations as requested by the New Brunswick Department of Natural Resources (Mines Branch), as well as data applicable to engineering, agriculture, forestry, and other fields

670038 Engineering geology of dam sites and other construction projects, northwestern Ontario Owen, EB QRG EGG Ont Pts 42,43,52,53 X

Obj.: To provide Engineering Geology advice as required by Inland Waters Branch for their feasibility studies of hydroelectric power sites and river diversion projects in north-west Ontario

670040 Geophysical investigations (Scott, WJ) EM Man,Ont 62 H,K;31 D/16,7;32 C/14, X Que,NB 12,5,6,G/15;21 E/7,0/10,G/3

Obj.: To determine the cause of certain elliptical electromagnetic anomalies in the Moose River area, Ontario and the thickness of the causative formation. To carry out similar investigations over the Winkler aquifer to test the method. To carry out similar investigations near Senneterre.

670041* VLF mapping Becker, A EG EM Ont 31 G/5,D/16 W $\frac{1}{2}$,32 D/2,3 X Que 6,7,10,11

Obj.: To assess the capabilities and limitations of using VLF radio waves as a means of providing geological information to delineate fault and shear zones

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
670050*	Airborne gamma spectrometry Obj.: Development of airborne gamma-ray spectrometry, ancillary navigational track and data recording systems, and the necessary data processing methods to produce radiometric maps which will facilitate and accelerate geological mapping from the air. The choice of scale for publication to be determined from study of experimental results obtained in 1968 and 1969.	Darnley, AG	EG	RSM	-	-	X	
670052*	Gamma-ray support Obj.: To provide detailed ground and laboratory investigations (geological and radiometric) to correlate with airborne data and establish its reliability and significance and to enable airborne measurements to be calibrated in terms of ground concentration	Charbonneau, BW	EG	RSM	-	-	X	
670053*	Radioisotope methods Obj.: (1) To develop application of lightweight portable radioisotope instrumentation for geological field use, especially <u>in situ</u> analyses of rock composition and (2) to provide laboratory analyses by radioisotope methods of control samples collected in support of airborne gamma spectry and airborne geochemistry	Grasty, RL	EG	RSM	-	-	X	
670054*	Infrared scanning Obj.: To recognize the surface distribution of rocks, soils, drainage and fracture patterns using I.R. scanning techniques. To determine the optimum conditions for I.R. surveys by studying the effects of day and night changes, seasonal changes and the effect of weather on the response of the ground.	Slaney, VR	EG	RSM	-	-	X	
670057	Volcanic study in the Kaladar area, Ontario Obj.: To sample a volcanic succession in the Grenville province near Kaladar, Ontario, to analyse the samples for major and minor elements and to relate variations in chemistry to stratigraphy	Baragar, WRA	CG	PS	Ont	31 C/14		X

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
670059*	Stratigraphy of Gog and Cariboo Groups near the Rocky Mt. Trench, McBride area, B.C.	Young, FG	ISPG	MS	BC	83 E;93 A,H	X
	Obj.: 1. To elucidate the stratigraphy and structure of the Gog and Cariboo Groups; 2. To determine the nature and amount of possible crustal displacements associated with the Rocky Mt. Trench by means of stratigraphic mapping						
670061*	Quaternary geology, Bow River Valley	Rutter, NW	QRG	RSP	Alta	Pts 82 0	X
	Obj.: To determine relationship of Cordilleran and Laurentide glaciation; to elucidate Quaternary chronology of the area. To map the distributions of surficial deposits of the area; to study and describe the geomorphology of the area.						
670062	DC Resistivity - Ontario	Collett, LS	EG	EM	Ont	Pt 31 G	X
	Obj.: The purpose of the project was to assess the capabilities and limitations of DC resistivity as a means of determining geological structure including the tracing of faults in the Ottawa area and to determine the resistivity of various geological formations in the map-area to provide data needed to assess the capabilities and limitations of other geophysical methods (such as AC resistivity, electromagnetic, INPUT and magnetotelluric) as aids to geological mapping						
670064*	Cretaceous and uppermost Jurassic biostratigraphy of western Cordillera	Jeletzky, JA	ISPG	WP	BC	92;93;103;104	X
	Obj.: To study the stratigraphy and palaeontology of Cretaceous and uppermost Jurassic (Buchia-bearing beds only) formations of the region in order to work out a detailed zonal sequence of marine faunas. The biostratigraphically important elements of these faunas are to be described and figured						

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. 70-71	Inact. 70-71
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670068*	Operation Norman	Cook, DG	ISPG	PS	Mack	86 D,E,L,M;87 B,C;96; 97 A-D,F;106 A,B,G-J,O,P; 107 A,D,E		X
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Obj.: To complete reconnaissance geological mapping, to conduct stratigraphic and structural studies, and to evaluate the economic potential of bedrock formations in the subject area; to embody the results of these studies in an integrated series of reports and maps, some under single authorship and others under multiple authorship according to the topic of the contribution

670074*	Seismic - Welland-Port Colborne	Hobson, GD	EG	SM	Ont	30 L,M		X
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Obj.: To determine thickness and nature of overburden and configuration of bedrock. To assist Mr. E.B. Owen in his studies associated with the New Welland Canal

670075	Hammer seismic surveys	Hobson, GD	EG	SM	Ont,NB	41 G/10; J/4; 21 J/5		X
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Obj.: To determine thickness and nature of overburden, and bedrock topography and lithology where possible

670083	File of diagnoses of fossil spores and pollen genera	McGregor, DC	CG	EP	-	-		X
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Obj.: To compile a file of diagnoses of fossil spore and pollen form genera of all geologic systems, on edge-punched cards cross-referenced for diagnostic features of the genera

670086	Schedule of Wells - N.W.T. and Y.T.	Yorath, CJ	ISPG	MS	Mack,Yk	-		X
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Obj.: Publication of Mesozoic formational tops for all wells drilled in N.W.T. and Y.T.

Project Number Title Project Leader Div. Sect. Prov. NTS Act. Inact. 70-71 70-71

670090 Subsurface Upper Paleozoic stratigraphy, Northwest Territories and Yukon Territory Martin, HL ISPG PS Yk 95 A-G,K,L,M;105;106 B-F, K-M;115;116 X

Obj.: (1) To provide geological information, particularly formational tops, as required by the Department of Indian Affairs and Northern Development for publication in their annual Schedule of Wells; and (2) to identify stratigraphically significant subdivisions of the interval; to determine their areal extent, thickness, lithologic character, structural configuration, and relationships to adjacent strata; to deduce the sequence of geologic events which produced them; to correlate the surface to subsurface stratigraphy; and to explain the relationships between porosity development and facies

670091 Clay mineralogy of Lower Cretaceous shales of northeastern British Columbia Foscolos, AE ISPG MS BC - X

Obj.: (a) Identify and examine the distribution of clay mineral facies geographically and stratigraphically. (b) Investigate the relationship between clay distribution and other stratigraphic parameters with objective of integrated paleoecological and paleogeographical studies.

670097 Geochemical study of economic elements in glacial till Garrett, RG EGG G - - X

Obj.: To ascertain the provenance and secondary geochemical cycle of minerals and other elements in Quaternary till as a basis for prospecting for underlying primary mineral deposits

670278* Structural and petrological study of Pinnacle Peaks gneiss dome, B.C. Reesor, JE CG Pet BC Pts 82 L/1,8,K/4 X

Obj.: To determine the origin, emplacement and tectonic history of the Pinnacle Peak gneiss dome. To compare the structural and metamorphic development of an "intermediate level" gneiss-dome complex (Pinnacle Peaks) with the deeper level Valhalla and Thor-Odin domes, and to elucidate the time of deformation and metamorphism of the Shuswap metamorphic complex.

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
670553	Development of 15" radius solid source mass spectrometer	Wanless, RK	CG	G	-	-	X
	Obj.: To design, fabricate and assemble a 15" radius 90° solid source mass spectrometer incorporating a vacuum lock, an electron multiplier, vac-ion pumping and other specific design features. Specifications to be chosen to realize a precision of 0.1% in the determination of the abundances of lead and an accuracy of ± 0.0001 in the determination of the $^{87}\text{Sr}/^{86}\text{Sr}$ ratios.						
670555	Statistical models for geological processes	Agterberg, FP	EGG	GP	-	-	X
	Obj.: By the application of the theory of Stochastic processes, to interpret and evaluate quantitatively geological processes, such as cycles of deposition of sediment and changes in the composition of lava flows, which cannot be so determined by direct field observation						
670557	Stratigraphy and ages of Precambrian sedimentary rocks and contained sills and dykes, east coast of Canadian Arctic Islands and north and northwest Greenland	Christie, RL	ISPG	AI	Frank	27-29; 37-39; 47-49; 57-59; 120; 340; 560	X
	Obj.: (a) to correlate or distinguish Precambrian sedimentary basins and to obtain information on movement of continental masses; (b) aided by age-determinations on diabase-gabbro sill rocks and other intrusive rocks, to compare the tectonic history of the Precambrian sedimentary rocks of the region						
670558	National isotopic age data file	Wanless, RK	CG	G	-	-	X
	Obj.: To develop and maintain a Canadian isotopic age date file, which will contain all available Canadian isotopic age data stored on magnetic tape with a flexible retrieval system which will permit the selection and print-out of any or all parameters for a given entry						

Project Number Title Project Leader Div. Sect. Prov. NTS

670559 Preparation of geological base map for Map 900-A Leech, GB EGG MD - - X

Obj.: Preparation of a suitable geological base map for Mineral Deposits Map 900-A
670561* Lunar crust investigation Maxwell, JA EGG SP - - X

Obj.: To provide a statement of the chemical composition of lunar material, including major, minor and trace elements, as part of the invited Canadian contribution to the NASA Apollo Manned Lunar Landing programme

670562 Studies of evaporite-carbonate-clastic suite, Souris River Formation (Devonian) Saskatchewan Macqueen, RW ISPG PS Sask 62 L;73 B X

Obj.: To determine the nature, stratigraphic relationships, and origin (including depositional, diagenetic, and geochemical history) of the Souris River Formation cycles as they are displayed in a bore hole core, and the shaft walls of a potash mine

670564 Time Domain EM Theory Becker, A EG EM - - X

Obj.: To devise a mathematical analyses for carrying out quantitative interpretation of INPUT data

670569 Clay minerals in Proterozoic sediments (Donaldson, JA) CG PS Kee Mack X

Obj.: Comparison of clay mineral content of sandstone and siltstone units of the Dubawnt Group, Goulburn Group, Athabasca Fm. and Martin Fm. based on mineralogical analyses of specimens now on hand

670576 Canadian Triassic Ammonoidea and Bivalvia Tozer, ET ISPG WP Frank, Yk BC, Alta X

Obj.: To describe and assess biochronological significance of Triassic Ammonoidea and Bivalvia in order to refine methods for dating Triassic rocks

Project Number Title Project Leader Div. Sect. Prov. NTS

670577 Stratigraphy and structure of Lower Cretaceous sedimentary rocks of the Waterton-Castle River area, Alberta Havard, Mrs. CJ ISPG SG Alta 82 G,H,J X

Obj.: To assist the oil industry in its search for hydrocarbon reservoirs through clarification of the differences in mechanical behaviour of the Mesozoic clastic succession and the Paleozoic carbonate skeleton

680004 Quaternary paleogeographic map of Canada Prest, VK QRG RSP - - X

Obj.: In connection with the INQUA Paleogeographic Map of the World, to prepare a map of Canada showing physical features at the time of maximum extent of glaciers during the Wisconsin glaciation

680005* Electrical conductivity - Lunar material Collett, LS EG EM - - X

Obj.: To determine the electrical conductivity of lunar material to be supplied by NASA

680012* Paleomagnetic study of Proterozoic red beds of the western Canadian Shield McGlynn, JC CG PS Kee Mack Sask 65;66;74;75 E,F;85;86 X

Obj.: To obtain paleomagnetic pole positions from various Proterozoic red bed sequences in the western Precambrian Shield for purposes of correlation

680015 Geological reconnaissance of eastern Devon Island, with additional stratigraphic studies on southeastern Ellesmere Island Christie, RL ISPG AI Frank 38 F,G;39 B,C,F-H; 48 E-H;49 A,B,D X

Obj.: (a) Obtain reconnaissance data for the Precambrian rocks of eastern Devon Island so that:
(i) these rocks and their history may be compared to those of the Canadian Shield;
(ii) structure of this area may be plotted and studied in the light of known structures of Ellesmere Island, Baffin Island, Greenland, and the intervening channels and Baffin Bay.

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(b) Obtain reconnaissance data for the sedimentary rocks of eastern Devon Island so that the stratigraphy of the Ellesmere - Devon - Baffin Island region may be better understood. An understanding of the stratigraphy of this large 'shelf' - type region will aid in defining the stratigraphic framework of the potentially oil-bearing basins to the west.
 (c) Obtain additional data (to add to data obtained by you in 1960 and 1961) on the Lower Paleozoic formations of southeast Ellesmere Island so that:
 (i) maps on a scale of 1 inch to 4 miles or other suitable scale may be published;
 (ii) the stratigraphy of southeastern Ellesmere Island may be better understood (as (b), above).

680017* Sedimentology laboratory develop- McDonald, BC QRG EGG - - X
 ment and operation

Obj.: (1) To monitor the techniques used in the sedimentology laboratories; to ensure their continuing and improving precision; to introduce new techniques into the laboratories; and to control the flow of samples through the laboratories; (2) to investigate the development of procedures and installations for experimental studies in sedimentology

680018 The environment of oil and gas in McCrossan, RG ISPG PofG - - X
 western Canada

Obj.: To study the occurrence of hydrocarbon in western Canada in search of principles that will help to understand its distribution hence aid in exploration. To advise the Geological Survey on direction of future research of value to the petroleum industry.

680019* Non-marine Lower Cretaceous of the Norris, DK ISPG SG BC 82 G,J,O X
 southeastern Canadian Cordillera Alta

Obj.: Assist the coal industry in its search for mineable reserves of low ash, coking coals through outlining of areas in the Kootenay coal swamps favourable for prospecting and exploitation

Project Number Title Project Leader Div. Sect. Prov. NTS

680022 Geochemical study of Papaskwasati Group Cameron, EM EGG G Que various X

Obj.: To obtain geochemical information which will allow the subdivision and hole-to-hole correlation of these sediments, determine the type and direction of the source of the sediments, and develop concepts allowing the prediction of suitable locales for the occurrence of uranium ore in these sediments

680023 X-ray diffraction analyses and mineralogical studies Traill, RJ EGG M - - X

Obj.: To assist in the identification and inventory of potential mineral resources in Canada by provision of X-ray diffraction analyses and other specialized mineralogical data for use by earth scientists engaged in studies of minerals and mineral deposits

680024 Kogaluk River area, Quebec Stevenson, IM CG PS Que 34 X

Obj.: Compilation of a map at 1:1,000,000 scale using all available geological and geophysical information. This map to be part of the 1:1,000,000 Geological Atlas of Canada.

680026 Dendrochronological investigations Parker, ML QRG PG - - X

Obj.: By a study of the tree-ring record to provide chronological and climatological information required for dating of postglacial events and for relating available weather data to other kinds of evidence used in the reconstruction of past environments

680027 Quaternary geology and geomorphology of Tawatinaw area, Alberta St-Onge, DA QRG RSP Alta 83 I X

Obj.: To gather information concerning Quaternary including geomorphic features, concentrating particularly on surficial materials and landforms for forestry; to provide data applicable to engineering, groundwater and other fields. To contribute to knowledge of the Quaternary stratigraphy and chronology of the region.

680028* Development of radiochemical exploration methods using radon Dyck, W EGG G Sask 74 N/9; pt 31 Ont, Que X

Obj.: To develop radiochemical prospecting techniques for uranium and for other economic elements associated with uranium in mineral deposits

680030* Geology of the Precambrian Shield in the Rivière Gatineau map-area Baer, AJ CG PS Ont Pt 31 Que X

Obj.: To assess and interpret available geological information on the Precambrian of the area, and to identify and study the key structural problems therein

680031* Quaternary stratigraphy of Old Crow Basin and Porcupine River Valley Hughes, OL QRG RSP Yk Pts 116 O; 117 A, B E½ X

Obj.: Through investigation of Quaternary deposits and associated organic remains, to gain knowledge of the Quaternary stratigraphy and history of the region and to provide a geological framework for current vertebrate paleontology and archeology; studies by National Museum scientists

680032 Quaternary reconnaissance, north-west District of Mackenzie Fulton, RJ QRG RSP Mack 86 F, L, M; 96 I-P; 87 B, C; 97 A-D, F; 106 I, J, O, P; 107 A, D, E X

Obj.: To map and explain Quaternary deposits and landforms in order to: (1) establish their stratigraphic sequence and age and to outline the Quaternary history of the area; and (2) provide areal geological information including data applicable to permafrost and engineering studies

680035* Borehole and related geophysical techniques Wyder, JE QRG EGG - X

Obj.: To evaluate potential use of surface and borehole geophysical techniques as tools for studying Quaternary deposits; to develop new geophysical techniques, to modify existing ones, and to install, test, and modify equipment

Project Number Title Project Leader Div. Sect. Prov. NTS

680036* Sidewall sampling and geophysical service Wyder, JE QRG EGG - - X

Obj.: To provide sidewall sampling and geophysical services as required, in support of Division projects, or other projects as required

680037* Hammer seismic surveys Hunter, JM EG SM - - X

Obj.: To determine thickness and nature of overburden and configuration of bedrock to assist Quaternary, geochemical, groundwater and geophysical studies. To develop new procedures in field and interpretation of shallow seismic techniques.

680038* Geology of northern Vancouver Island Muller, JE CG CPM BC Pts 92 E,K,L;102 I X

Obj.: To complete the reconnaissance geological mapping of the northern part of Vancouver Island, assess its mineral potential, and contribute to knowledge of the Pacific continental margin

680039* Study of continental drift Kerr, JW ISPG AI - - X

Obj.: To elucidate the developmental history of North Atlantic and Arctic regions

680040 Proglacial geomorphology, Generator Lake, Baffin Island Barnett, DM QRG RSP Frank Pts 27 C;37 D X

Obj.: To map and explain glacial, lacustrine, and related landforms and deposits associated with both present and former levels of Generator Lake and to measure pertinent aspects of modern glacio-lacustrine processes in order to elucidate the geomorphology and chronology of the area as a model of the proglacial lacustrine environment

680043 Quaternary geology, Port Stanley (Dreimanis,A,Prof) QRG RSP Ont 40 I/II X

Obj.: To map, describe and explain the Quaternary deposits and landforms in order to provide:
(1) areal information; (2) knowledge of the Quaternary stratigraphy and chronology of the region; and (3) background information applicable to soils mapping, engineering, groundwater, etc. Investigations are to be directed towards completion of mapping of the area, which was commenced under the Ontario Department of Mines.

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act.	Inact.
680044	Quaternary reconnaissance, north-eastern Baffin Island Obj.: Reconnaissance study and mapping of glacial deposits, landforms, and other Quaternary features in order to: (1) provide areal description data on the Quaternary geology and geomorphology of the assigned area; and (2) determine the chronology of events involved in glaciation, deglaciation, marine submergence, recent changes, etc.	Hodgson, DA	QRG	RSP	Frank	37 G,H;38 A-C;pt 48 D	X	
680045	Submarine morphology off the north-east Baffin Island Obj.: To extend knowledge of glacial erosional and depositional forms to areas below present sea-level (i.e. fiords and continental shelf) by continuous profiling with an echo sounder.	Hodgson, DA	QRG	RSP	Frank	-	X	
680046	Geomorphology of delta lakes, Mackenzie Delta Obj.: To determine mechanisms and stages of development involved in subdivision of delta lakes by reversing channel levees, by investigating geomorphic forms, sediments in place, transport of suspended sediment, permafrost distribution, etc.	Lewis, CP	QRG	EGG	Mack	Pts 107 B		Undecided
680047*	Geomorphic processes, Mackenzie Valley - Arctic coast Obj.: To describe, measure, and explain geomorphic features and processes related to permafrost, and to fluvial, lacustrine, coastal, eolian, and mass wasting activity in a permafrost environment	(Mackay, JR Prof)	QRG	EGG	Mack Yk	Pts 85,95,96,97,106,107, 117	X	
680051	Development of biogeochemical exploration methods for metallic mineral deposits for winter use Obj.: To develop and test biogeochemical exploration methods for evaluation of their effectiveness as a guide to finding economic mineral deposits, particularly under winter conditions	Hornbrook, EHW	EGG	G	Mack Ont	86 N/7,8, 0/5; 31 M/11,12	X	

680055* Quaternary geology, Great Lakes Lewis, CFM QRG RSP Ont & adj USA - X

Obj.: To map, describe, and explain unconsolidated deposits, associated organic remains and geomorphic features of the Great Lakes in order to: (1) determine Quaternary stratigraphy, history, and paleoecology; (2) identify processes operative in the lakes during the Quaternary and the factors controlling them; (3) to provide areal geological knowledge including background information for other scientific studies in the Great Lakes

680057* Sedimentological study of the Hornby Group (Donaldson, JA CG PS Mack 86 N $\frac{1}{2}$;96 N E $\frac{1}{4}$ Prof) X

Obj.: To interpret the depositional history of the sedimentary units in the Hornby Bay Group and to assess possible correlations with similar rocks elsewhere on the Precambrian Shield

680059* Magnetic properties of moon samples Larochele, A EG RM - - X

Obj.: To take part in the experimental studies carried out on the samples of lunar crust to be recovered by the Appolo Mission of NASA and made available to the Geological Survey by the latter; in particular to determine the magnetic properties and components of magnetization of these samples

680060* Geology of silver and gold deposits in Canada Thorpe, RI EGG MD - - X

Obj.: To carry out comprehensive research on the geology of silver and gold deposits in order to provide a geological basis for exploration and assessment of silver and gold potential in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypotheses on geological environments, provenance and genetic processes of silver and gold deposits; (5) determination of regions and geological units in Canada most favourable for the occurrence of each type of deposit.

680062* Quaternary geology, Kingston N $\frac{1}{2}$ Henderson, EP QRG RSP Ont 31 C N $\frac{1}{2}$ X
 Obj.: To map and explain the Quaternary deposits and landforms of the area in order to elucidate the glacial history of the region and to provide areal geological knowledge including data pertinent to groundwater, engineering, agriculture, and forestry

680063* Permian biostratigraphy, northern Nassichuk, WW ISPG AI Yk 116 H; 104 H X
 British Columbia and northern Yukon BC

Obj.: To establish the relationship between Permian rocks in selected areas of northern British Columbia and northern Yukon and those of the Sverdrup Basin and West Texas

680064 Stratigraphy and paleontology of Nassicuk, WW ISPG AI Frank 49 B,F,G,H;340 A-D;560 A X
 Upper Paleozoic rocks on parts of Ellesmere and Axel Heiberg Islands

Obj.: To improve the understanding of the stratigraphy and facies relationships of the marginal and axial parts of the Sverdrup Basin; to establish a biostratigraphic framework for Carboniferous and Permian rocks; and to evaluate the economic potential of the area

680065* Pumice on raised beaches, Blake, W Jr QRG PG Frank Pts 120,340,29,39,49,59, X
 eastern Arctic Canada Kee,Que 69,38,48,58,68,27,37,47, Nfld 57,16,26,36,46,15,25,35, 14,24,13

Obj.: To locate sites where pumice occurs on raised beaches in eastern Arctic Canada and determine elevation, age, and origin of the pumice in order to: (1) correlate raised marine levels throughout the region; (2) calculate regional tilt of raised marine features, using pumice level as a guide horizon; and (3) determine the form of the last ice sheet

680066* Geology of the Cariboo Mountains, Campbell, RB CG CPM BC 83 D;93 A,H X
 British Columbia

Obj.: To determine the tectonic development of the Cariboo Mountains, and their relation to the development of the Rocky Mountains

Project Number Title Div. Sect. Prov. Pts 31 L/3,4,6,7 X

680067 Quaternary geology, North Bay-Mattawa (Harrison, JE) QRG RSP Ont Pts 31 L/3,4,6,7 X

Obj.: To map, describe and explain the Quaternary deposits and landforms in order to: (1) determine the sequence of events and environments involved in glaciation and deglaciation with special reference to the sequence of outlets of the Great Lakes; and (2) to gather areal data applicable to soils mapping, forestry, groundwater and engineering

680068* Mesozoic palynology and bio-stratigraphy, western and northern Canada Hopkins, WS Jr ISPG WP Frank Mack, Yk BC, Alta - X

Obj.: Description of microfloras from Mesozoic rocks, particularly the Sverdrup Basin. Establishment of sequence of floral zones necessary for biostratigraphic control in this region of active exploration for petroleum resources. Ultimately the project will allow description of floral evolution and migration through the Mesozoic and into the Tertiary

680071* Alkaline rocks in Canada Currie, KL CG Pet - X

Obj.: To identify and examine occurrences of alkaline rocks in Canada, and to explain their origin, development and emplacement

680073* Magnetic anomaly map of Canada MacLaren, AS EG SP - X

Obj.: To construct a magnetic anomaly map of Canada on a scale of 1:5,000,000; to provide a broad picture of magnetism in the crust to assist structural studies

680074 Geology of the Seal River map-area, Manitoba Davison, WL CG PS Man 64 NE X

Obj.: To revise, compile and interpret the available geologic and aeromagnetic data on Seal Lake area as part of a general revision of geological mapping in Manitoba for assistance to the mineral industry. Publication scale, 1 inch to 8 miles

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
680075	Compilation of 1,000,000 map, Cochrane River area, Manitoba	Davison, WL	CG	PS	Man	64	X
	Obj.: To prepare a geological compilation of the geology of the area as part of the National Atlas Series 1:1,000,000						
680076	Geology of Southern Indian Lake	Davison, WL	CG	PS	Man	64 SE	X
	Obj.: To assess the economic potential of the area and examine regions of particular geologic interest before flooding caused by construction of the Southern Indian Lake diversion dam. Particular attention will be given to the relationships of the Sickle and Wasekwan Groups to various intrusive rocks of the region						
680078	Tuadook Lake map-area, N.B.	Skinner, R	CG	AELAM	NB	21 J/15	X
	Obj.: To determine the structure, stratigraphy and igneous, metamorphic and tectonic history of a portion of the central Mineral Belt of New Brunswick, as an aid to the economic development of the area						
680081*	Queen Air high resolution aeromagnetics	Hood, PJ	EG	MM	Ont NS	31 F/1,2,7,8, C/15,16; 11 E,F	X
	Obj.: 1. To design, fabricate, install and test a high resolution rubidium vapour aeromagnetic survey system in a Queen Air aircraft. 2. To conduct high-resolution aeromagnetic test surveys with this system to evaluate its use as an aid to geological mapping						
680082	Annual reviews, exploration techniques	Hood, PJ	EG	MM	-	-	X
	Obj.: To provide an annual review of new geophysical, geochemical, data recording and compilation techniques						
680083	Recompilation - Timmins area	Ready, EE	EG	AS	Ont	41 P/10,11,14,15;42 A/1-3, 6-11	X
	Obj.: To recompile aeromagnetic data in the Timmins area at 1" = 1/2 mile and publish more detailed maps						

Project Number Title Project Leader Div. Sect. Prov. NTS

680084* Operation Smoky Taylor, GC ISPG SG BC, Alta 93 I, O, P; 83 L X

Obj.: Establish the interdependent relationships of the structure, and stratigraphic succession between the contrasting areas of the southern Rocky Mountains and those of the northern Rocky Mountains

680085* Structural and stratigraphic study of the Precambrian rocks of southwestern Keewatin, N.W.T. Eade, KE CG PS Kee 65 A W $\frac{1}{2}$, B, C, G W $\frac{1}{2}$, L W $\frac{1}{2}$ X

Obj.: To determine: (1) the relationships of the known Hurwitz group rocks to other metasedimentary units, and the extent and characteristics of the original basins of deposition in order to assess their potential for mineral occurrences, (2) the petrology and mineral potential of the post-kinematic fluorite bearing porphyritic rocks

680089* ARES (airborne resistivity electro-magnetic system) Becker, A EG EM - - X

Obj.: The development of a variable frequency airborne EM system to aid in geological mapping through the measurement of the electrical properties of the ground

680090 Identification of unknown minerals by X-ray and chemical techniques Foscolos, AE ISPG MS - - X

Obj.: Quantitative and semi-quantitative analysis of clay, minerals and elements in samples submitted by GSC staff

680091* Clay mineral investigation Foscolos, AE ISPG MS - - X

Obj.: To improve and develop techniques for routine mineralogical and chemical analyses of clays; to develop better techniques for quantitative, semi-quantitative and qualitative analyses of clays and clay minerals in sedimentary rocks; to conduct research related to the crystal lattice structure of clay minerals; with the ultimate objective of obtaining more precise analyses and a better understanding of clay minerals. These studies should also determine those parameters that may affect the migration of fluids within sedimentary rocks and also those that may be useful for the interpretation of paleoecology and paleoenvironments

680092 Geology of Southampton Island Heywood, WW CG PS Kee X
45 M-P;46 A-C,F;pts
46 D,E,G

Obj.: To conduct a geological study of Southampton Island, N.W.T., with particular attention to:
(1) correlation of the Precambrian rocks with those in eastern Keewatin and Baffin Island;
(2) the determination of the basic stratigraphy of the Paleozoic rocks; and to the economic potential of the region

680093* Devonian biostratigraphy, western Pedder, AEH WP Frank, Mack X
and northern Canada Yk, BC, Alta

Obj.: Establishment and refinement of Devonian faunal sequences to allow correlation of Devonian rocks of western and northern Canada. The project will provide time control that will aid greatly the search for Devonian stratigraphic traps and thus assist the exploration of the natural resources of the Devonian rocks of the region

680094 Quaternary map, Stephenville Prest, VK QRG RSP Nfld 12 B X

Obj.: To set up a mutually satisfactory and acceptable arrangement with Mr. I. Brookes, Department of Geography, York University, for submission to the Geological Survey of a map of surficial features of Stephenville map-area (or part thereof) suitable for publication

680095 A Grenville front Magnetic Anomaly Charbonneau, BW EG RS Que 32 B W₁, C E₂ X

Obj.: The correlation of magnetic and geological data to explain a large aeromagnetic anomaly near the Grenville Front east of Senneterre, Quebec

680096 Studies in the Seal Lake volcanic Baragar, WRA CG PS Nfld 13 K,L X
province

Obj.: To determine the characteristic composition variation in composition, and stratigraphy of the Seal Lake, Croteau, and Letitia volcanic successions with a view to elucidating the character of volcanism and the history of the Seal Lake belt. To provide data that may be of aid in prospecting

680097 Geomorphology, Cypress Hills and Bik, MJJ 72 E, L S $\frac{1}{2}$; 82 H E $\frac{1}{2}$, I SE X
adjoining parts of southern Alberta

Obj.: To determine and explain Quaternary and late Tertiary geomorphic history with particular reference to: (1) climatic and tectonic changes since glaciation; (2) drainage development since glaciation; (3) preglacial/interglacial drainage and (4) structural control of landscape. To provide information about climatic and geomorphic events through investigation of landforms and associated sediments, and to gain knowledge of Quaternary crustal warping through comparison of surface and subsurface data and analysis of geomorphic features.

680098* Surficial deposits and geo- Bik, MJJ Ont Pt 31 G/5_h X
morphology, Central Research Forest

Obj.: (1) To prepare a map and one or more stratigraphic sections illustrating near-surface materials and landforms within the Research Forest in order to provide geologic and geomorphic background data for forestry programs. (2) To determine history of events and environments represented by the near-surface materials and landforms in and around the Research Forest paying particular attention to the nature and rate of processes of slope degradation and colluvial accumulation that have modified the margins of abandoned channels.

680101* Conodont biostratigraphy of Uyeno, TT Frank 49;58;59;68;69;78;79; X
Paleozoic rocks of the Arctic 88;89;560
Islands

Obj.: To set up zonal standards for conodonts for the Arctic Islands to correlate conodont and palynomorph zones in measured sections; and to obtain fossil data of immediate use of those engaged in geological mapping of the Arctic Islands

680102* Rank studies of coal and carbon- Hacquebard, PA CG CR -- X
aceous matter

Obj.: To obtain information on local and regional changes in metamorphism, with application towards structural geology, search for oil and gas, and possibly mineralization areas

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Insect. 70-71 70-71
680103	Environmental and facies studies of coal	Hacquebard, PA	CG	CR	-	-	X
	Obj.: To carry out fundamental research on the origin of coal constituents and deposition of coal, by coal petrological, palynological and sedimentological investigations						
680104*	Coal mine geology and evaluation of coal reserves	Hacquebard, PA	CG	CR	NB <u>NS</u>	-	X
	Obj.: To assist the coal mining operations (in cooperation with the Provincial Departments of Mines)						
680105*	Petrography of coal seams in the Rocky Mtn. Foothills Belt north of the Crowsnest area	Hacquebard, PA	CG	CR	BC Alta	-	X
	Obj.: To examine the petrography of these coals in order to determine their coking properties and prepare seam profiles for correlation purposes						
680106	Uranium possibilities in lignite	Cameron, AR	CG	CR	Yk,BC Alta,Sask	-	X
	Obj.: To check the uranium content of Tertiary lignite deposits for the purpose of delineating areas that are geologically favourable for the occurrence of U ₃ O ₈ .						
680108	Petrography of Tertiary coals in southern British Columbia	Donaldson, JR	CG	CR	BC	-	X
	Obj.: (1) To evaluate the coking characteristics in those areas where the coal has been upgraded by metamorphism. (2) Fundamental research on petrography of Tertiary coals						
680109	Carboniferous and Permian palynology	Barss, MS	CG	CR	-	-	X
	Obj.: To determine the spore content of the Upper Paleozoic succession as an aid to stratigraphy and for worldwide correlations. To study taxonomy of new forms and adequately describe them.						

Project Number Title Project Leader Div. Sect. Prov. NTS

680110 Petrography of the coal seams of Telkwa River area, B.C. Hacquebard, PA CG CR BC 93 L/11 X

Obj.: To examine the petrography of these coals in order to determine their coking properties and prepare seam profiles for correlation purposes

680112 Silurian-Ordovician macro-biostratigraphy, Lake Timiskaming and Lake Nipissing Bolton, TE CG EP Ont Que 31 L,M X

Obj.: Investigation of Silurian and Ordovician macrofauna of Lake Timiskaming and Lake Nipissing, Ontario, with subsequent description of important faunal elements and correlation with similar eastern Canada assemblages

680113 Biostratigraphy study of Paleozoic palynomorphs of the Arctic Islands McGregor, DC CG EP Frank 49;58;59;68;69;78;79;88;89;560 X

Obj.: (1) To set up zonal standards for palynomorphs for the Arctic Islands. (2) To correlate palynomorph zones with conodont zones on measured sections. (3) To obtain fossil data of immediate use to those engaged in geological mapping of the Arctic Islands.

680114 Development and supervision of mineral deposits data bank Whitmore, DRE EGG MD - X

Obj.: To develop and establish a computer-based file or files of mineral deposit data compatible with the National System for storage and retrieval of geological data in Canada, to provide a continuing and up-to-date bank of data as a basis for studies by all officers of the Mineral Deposits Section

680115* Keweenaw volcanic succession, Sault Ste. Marie (Annells, RN CG PS Ont Pts 41 K,N PDF) X

Obj.: To determine the petrography, composition, and stratigraphy of the Keweenaw lavas in eastern Lake Superior; to demonstrate the character, history, and origin of the volcanism

680117 Ordovician and Silurian Copeland, MJ CG EP Ont 31 L,M X

Ostracoda, Lakes Nipissing and Timiskaming, Ontario

Obj.: Stratigraphic zonation of Ordovician and Silurian strata based on their contained microfaunas

680118 MacMillan River (NTS 105; 115) Gabrielse, H CG CPM Yk 105;115 X

map-area. 1:1 million Geological Atlas Program

Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological Atlas of Canada. More detailed objectives are as 1 April 1969 of File 116-6-4

680119* Operation Stewart Blusson, S CG CPM Mack,Yk 105 N,0;106 B,C X

Obj.: To outline and interpret the regional stratigraphy and structure in a previously unmapped part of the Selwyn basin and to relate these features to the search for mineral deposits analogous to the Keno Hill and Vangorda deposits on the west and south

680121* Aeromagnetic interpretation - McGrath, PJ MM NB,MS 21; 12; 11; 2; 1 X
Appalachia PEI,Nfld

Obj.: Utilization of geologic, aeromagnetic, ground magnetic, and rock magnetic data to delineate the regional crustal structure of the Canadian Appalachian region. A primary aim will be the production of a map of the pre-Carboniferous surface in the southwestern portion of the Gulf of St. Lawrence

680122 Crustal seismic, Logans Line Overton, A EG SM Que,NB Pts 22, 21 X

Obj.: Recording, interpreting and publishing results of the study of crustal seismic data from north and south of the Logans Line in order to determine whether there are differences in seismicity which could be correlated with geological gravity features in either side of the line. The data may also show differences on either side of the line. The data may also show differences on either side of the Grenville Front.

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
680123*	AFMAG surveys	Collett, LS	EG	EM	Sask, Pts 74 N, 63 I, J, N, O, P, Man, NS 11 E, F		X
	Obj.: To assess the value of airborne AFMAG surveys as aids to geological mapping and exploration						
680124	Mineralogy and petrology -- lunar material	Douglas, JAV	CG	Pet	-		Undecided
	Obj.: To take part in laboratory investigations of samples returned by Apollo mission of NASA, and to report findings and conclusions in publications						
680129*	Quaternary geology, Taseko Lakes	Heginbottom, JA	QRG	RSP	BC	92 0	X
	Obj.: To map, describe and explain the Quaternary deposits and landforms in order to provide areal information, concentrating on presentation of data for forestry and for ARDA classification purposes						
680130*	Operation Strait of Belle Isle	Cumming, IM	CG	AELAM	Que	Pts 2 M, 3 D, 12 I, P, 13 A Nfld	X
	Obj.: To determine the structure and origin of Strait of Belle Isle; for possible future engineering works and to assess petroleum and mineral potential of the operation-area						
680132	Application of mathematics to Quaternary research and geomorphology	Shimizu, K	QRG	Adm	-		X
	Obj.: To serve as a consultant to research scientists on mathematical, statistical and computer programs; to investigate the application of mathematical and statistical techniques to geological and geomorphological problems						
680133	Correlation of coal rank and hydrocarbon properties in Mesozoic rocks of western Canada	McCrossan, RG	ISPG	GofP	-		X
	Obj.: To utilize coals from the subsurface of western Canada as a guide to the low temperature metamorphism suffered by the sedimentary rocks. The ultimate object is to utilize this information in predicting the nature of hydrocarbon present in new areas from which coal samples have been obtained						

Project Number Title Project Leader Div. Sect. Prov. NTS Act. Inact. 70-71 70-71

680134 Regional distribution of gaseous hydrocarbons in the Arctic archipelago McCrossan, RG ISPG GofP Frank - - X

Obj.: To examine the presence of source rocks and near surface hydrocarbon accumulations in the Arctic Archipelago in order to evaluate the potential for hydrocarbon occurrence in commercial quantities

680135* Basin analysis of the Athabasca sedimentary basin Fahrig, WF CG PS Alta Sask 74 X

Obj.: To study the sedimentary parameters of the Athabasca sedimentary basin, including the logging and evaluation of drill hole cores, so as to develop criteria of possible use in the economic development of the basin

680138* Offshore studies, UBC contract Wheeler, JO CG CPM BC - - X

Obj.: To determine the geology on the Continental Shelf in the nearshore waters off the coast of British Columbia

680139 Quantitative aeromagnetic interpretations Bhattacharyya, BK EG TGDA - - - X

Obj.: (1) To delineate crustal magnetic sources using existing conventional aeromagnetic data by preparing a series of residual and filtered aeromagnetic maps and maps at various scales containing information about basement depth, Currie point, geotherm. and polarization vectors; (2) to design digital filters for filtering out the effects from unwanted sources to enhance effects of sources being delineated; (3) to develop for application computer-oriented methods for analysis and interpretation of aeromagnetic data

680140* Hi-resolution aeromagnetic data Bhattacharyya, BK EG TGDA - - - X

Obj.: (1) To produce hi-resolution aeromagnetic maps of specified areas at a scale of 1:25,000 and larger; (2) to carry out quantitative interpretation of compiled total field and gradiometer data in geological terms

Project Number Title Project Leader Div. Sect. Prov. NTS

680141 Pattern recognition Bhattacharyya, BK EG TGDA - - X

Obj.: To conduct research into computer methods of automatically recognizing prescribed patterns within a mass of observed data distributed over a map or aerial photograph

680143 Study of the contribution of the GSC to the economic development of Canada Lang, AH EGG SP - - X

Obj.: To assess work done by the Geological Survey in the past, particularly since World War II, for the purpose of: (1) Providing guidelines for development of the Branch program. (2) Supplying data for evaluating usefulness of the Branch program to be used in submissions to the Department and Treasury Board. (3) Evaluating the relative usefulness economically and scientifically of the various components of the Survey's programs such as detailed geological mapping relative to reconnaissance mapping, development of various methods to be used in mineral exploration, 'commodity' mineral deposit studies, metallogenic studies, studies in mineralogy, paleontology, petrology, structural and tectonic geology, geochemical surveys, geophysical surveys, etc. (4) To evaluate the relative usefulness of the Survey's role in data production versus interpretation of data. (5) To develop and use 'conceptual model studies' for determining, quantitatively (in dollars) and qualitatively, benefits of activities as in (3) and (4). Studies such as outlined above should lead to a comprehensive review of the part played by the Geological Survey, and help to guide its future roles, in support of Canada's mining and petroleum industries, in developing the science of geology and in contributing to the economic growth of the country. Consideration of past events on a long term basis is necessary because of the lengths of time commonly required for discovery of mineral deposits to accrue from published geological data.

680147 Preparation of book "Introduction to Mathematical Geology" Agterberg, FP EGG GP - - X

Obj.: To prepare a book on mathematical geology for publication by the Elsevier Publishing Company

680148 The development of K/Ar dating techniques and their application to very young continental basalts, from British Columbia
 Wanless, RK CG G BC 93 C/11,14;104 G/6,7,10, 11,14 X

Obj.: To develop experimental techniques required to precisely determine the age of young terrestrial basalts and to establish the lower age limit for application of the methods

680149 Committee on the History of the GSC Leech, GB EGG MD - X

Obj.: To advise the Director on the progress of the preparation of the history of the Geological Survey of Canada, and to comment when requested on the draft copies of the manuscript

690002* Sedimentology and stratigraphy of clastic formations in the Arctic Islands
 Trettin, HP ISPG AI Frank - X

Obj.: To elucidate the pattern and history of clastic sedimentation in the Arctic Islands with a view to aiding the discovery of petroleum deposits

690003 Subsurface Cambrian stratigraphy in north central Alberta
 Pugh, DC ISPG PS Alta 73 L,M;83 I-P X

Obj.: To carry out a thorough regional study of subsurface Cambrian strata within Alberta between Tps. 63 and 80, i.e., to identify, describe and determine the distribution of formations and their various facies; to interpret these data in terms of geological history and environments to determine their economic potential as possible hosts for oil and gas; and to publish the results as a report by structure, isopach and isolith maps

690004* Triassic subsurface studies in northeastern British Columbia
 Gibson, DW ISPG MS BC 93 I,O,P;94 A,B,G-K,N-P X

Obj.: To establish the stratigraphic relationships of surface and subsurface Triassic successions in northeastern British Columbia; to provide data on lateral variations and for an evaluation of the economic potential

690005* Structural geology of northern Yukon Territory and northwestern District of Mackenzie
Norris, DK ISPG SG Mack 117 A-D X
Yk

Obj.: Critical evaluation of the structural geometry of Richardson, Barn and British Mountains, intervening plateaux, and adjacent coastal plain for documentation of the nature, origin and mechanics of the deformation and its bearings on the hydrocarbon and mineral potential of the region

690006* Lower and Middle Paleozoic biostratigraphy Gaspé, Quebec, Maritime region and Newfoundland
Dean, WT CG EP Que X
NS,Nfld

Obj.: To obtain data on the Lower and Middle Paleozoic rocks of Quebec, New Brunswick, Nova Scotia and Newfoundland from which may be provided: (1) description and classification of the significant macrofauna of each stratigraphic unit studied; (2) local and regional correlation consistent with the above data

690008* Compilation of California Lake map-area, N.B.
Skinner, R CG AELAM NB 21 O/8 X

Obj.: To compile the geology of California Lake map-area from field work of C.H. Smith with recent maps and data of N.B. Mineral Resources Branch and mining companies to produce a terminal map with marginal notes

690009* Smithers map-area
Tipper, HW CG CPM BC 93 L X

Obj.: To interpret the structure, stratigraphy, and geological history of the Smithers map-area and to provide a regional structural, stratigraphic, and plutonic framework to which the mineral deposits can be related

690010 Berens River-Deer Lake map-area
Ermanovics, IF CG PS Man, Ont 63 A E $\frac{1}{2}$; 53 D W $\frac{1}{2}$ X

Obj.: To revise and reinterpret the geology and economic potential of a Precambrian terrain known only through gross reconnaissance carried out in 1936

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
690011*	Quaternary geology, Big Bend-Canoe River	Achard, RA	QRG	RSP	BC	Pts 82 M E $\frac{1}{2}$, N; 83 C, D	X
	Obj.: To gather areal information regarding Quaternary geology in advance of hydroelectric development; to determine chronologic sequence of Quaternary events and environments; to provide data applicable to engineering, groundwater, forestry and agriculture						
690013	Catameran Fault	Anderson, FD	CG	AELAM	NB	Pts 21 I, J, O, P	X
	Obj.: To determine the displacement, deformational style and evolution of the faults, and their relationship to structural development of Bathurst mining camp rocks						
690014*	Study of conglomeratic uranium deposits in Canada	Bottrill, TJ	EGG	UP	-	-	X
	Obj.: As part of the Branch uranium programme, to provide comprehensive data and scientific appraisal of conglomeratic uranium deposits in Canada, as a basis for uranium exploration and for assessment of the economic potential, characteristic geological environment, origin and provenance of these deposits						
690015*	Structural evolution of rocks of the Bathurst-Newcastle district, N.B.	Helmstaedt, H	CG	AELAM	NB	Pts 21 O, P	X
	Obj.: To determine the structural evolution of Paleozoic rocks of Bathurst-Newcastle district, the geometry of the rocks and sequence of structural events, and relate these features to sulphide orebodies. To improve knowledge of the geological history of the district and explain the broad structural control of orebodies, thereby aiding exploration.						
690016	Liaison officer for expansion of repository wing, I.S.P.G., Calgary	Latour, BA	ISPG	Adm	Alta	-	Undecided
	Obj.: To act as agent for the Branch with respect to details arising during the planning, construction, and takeover of the new repository area and until the expiration of the warranty period						

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact.
690017*	Rocky Mountain Foothills map and cross-section compilation	Ollershaw, NC	ISPG	SG	Alta	82 G-J,0;83 B,C,F	X
690018*	Cretaceous and Tertiary conglomerates and sandstones of the eastern Cordillera	Ollershaw, NC	ISPG	SG	BC <u>Alta</u>	82;83	X
690019	Structural mechanics of southeastern Canadian cordillera	(Stauffer, MR)	ISPG	SG	BC Alta	82 G,J,0	X
690020*	Mesozoic-Tertiary stratigraphy and sedimentation - Beaufort-Mackenzie area	Yorath, CJ	ISPG	MS	Mack <u>Yk</u>	106 N;107;116 N;117	X

Obj.: Are essentially to provide a hitherto unavailable, comprehensive geological map and structure cross-section coverage, on a scale of 1:250,000 of the Rocky Mountain Foothills of south and central Alberta, based on Geological Survey and company geologic and seismic data, through the liaison of the A.S.P.G. These maps and sections will be an invaluable direct basic guide to mineral exploration and evaluation, in this active oil and gas development area, and indirectly through their contribution to the knowledge of Cordilleran tectonics

Obj.: Are firstly, to answer some of the questions relating to the tectonic history of the eastern Cordillera, such as the distribution, and tectonic implications of the Cretaceous and Tertiary conglomerate facies, the sequence and distribution of uplifts and the nature of the sedimentation pattern. Secondly, through these data to provide the oil and gas industry with more facts on which to base the interpretation of the potential migration and present structural distribution of hydrocarbons.

Obj.: Evaluation of the structure of the southeastern Canadian Cordillera to determine its potential for kinematic modelling of orogenic processes

Obj.: To determine the geological history of the Beaufort-Mackenzie Basin; to provide geological data in order to assist in the establishment of proper conservation regulations; and to contribute to the realization of the economic potential of the area

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
690022	Petrographic study of particulate types in coking coal charges	Cameron, AR	CG	CR	Yk, BC, Alta NB, NS	-	X
	Obj.: To determine the effect of petrographic variation as expressed by microlithotypes or particulate types on the coking behaviour of coals as charged to the coke oven, as an aid in the evaluation of the coking coals of western Canada						
690023	Upper Paleozoic rocks of Stikine Arch	Monger, JWH	CG	CPM	BC	104 A, B, G, F, K, L	X
	Obj.: 1. To correlate Late Paleozoic rocks in Stikine Arch with established sections in Atlin Horst. 2. To determine the existence of facies belts in Stikine Arch (comparable to those in Atlin Horst). 3. From this to establish the paleotectonic setting of the northern Cordillera, from Cassiar to Coast Mountains, in Late Paleozoic time.						
690024*	A stratigraphic, sedimentological, and paleontological study of the Epworth Group, northcentral District of Mackenzie	Hoffman, PF	CG	PS	Mack	Pts 86	X
	Obj.: (1) to define the rock stratigraphic framework of the fold belt; (2) to establish regional correlation with the Great Slave, Goulburn and Snare belts; and (3) to determine the paleogeographic history of the sedimentary basin and the surrounding region, the probability and location of stratiform and peneconcordant mineral deposits, and the time stratigraphic zonation of the Precambrian						
690025*	Sedimentary geology of the Coppermine area	(Donaldson, JA Prof)	CG	PS	Mack	86 N, O	X
	Obj.: To define in NTS 86 O & N the units within the Coppermine sedimentary rocks, to determine their provenance, dispersal patterns, depositional environments economic potential and correlation with similar rocks elsewhere in the Shield						

Title Project Leader Div. Sect. Prov. NTS

690026* Petrographic correlation of coal seams at Carmacks, and evaluation of their coking properties Hacquebard, PA CG CR Yk 115 I/1 X

Obj.: (1) Correlation of coal seams in order to determine extent of mineable coals in Carmacks area.
(2) To predict coking properties from petrographic composition and rank determinations.

690028 Operations Coppermine and Bathurst Inlet Fraser, JA CG PS Kee Mack 66,67,76,77,86,87,96, 97 X

Obj.: To provide reconnaissance geological information and assess the economic mineral potential of 120,000 square miles of mainly unmapped terrane in the northwest Canadian Shield

690029 Surface geochemical prospecting for petroleum, central Alberta McCrossan, RG ISPG GofP Alta 82 O/15,16 W $\frac{1}{2}$ X

Obj.: To test efficacy of a surface prospecting technique in western Canada using traces of hydrocarbon in soils to detect pooled hydrocarbons at depth. Resulting maps will probably be published at 1:250,000.

690030* Belleoram map-area, Newfoundland, M.U.N. contract (H. Williams) Poole, WH CG AELAM Nfld 1 M/11;Pts 1 M/5,6,12 X

Obj.: To determine the stratigraphy and structure, and to appraise economic mineral potential of this geologically important part of Newfoundland

690032* Tectonic Framework of Sustut and Sifton Basins Eisbacher, G CG SP BC 94 D,E;104 H X

Obj.: To determine the late stage tectonic developments of the northern part of the eastern Cordilleran fold belt and its bearing on the environment of deposition of late Cretaceous and early Tertiary basins that are prospective regions of exploration for uranium and coal

690034 Petrochemical study of selected Grenville granulites Reinhardt, EW CG PS Ont Que X

Obj.: To accurately define the equilibrium conditions of granulite facies metamorphism for selected localities in the Grenville province of the Canadian Precambrian Shield so as to provide accurate estimates and comparisons of temperature, depth and partial pressures of volatile components that existed in regions of high-grade Precambrian metamorphism

690035 Overhauser magnetometer development Washkurak, S EG MM - - Undecided

Obj.: Develop a high sensitivity Overhauser magnetometer system

690036* Regional geochemical census of plutonic rocks in the eastern Yukon Garrett, RG EGG G Mack Yk X

Obj.: (1) To ascertain whether differences in geochemistry of these plutons can be used to distinguish those that have related deposits of W, Mo, Sn, Au, and Cu and those that do not. (2) To contribute chemical data on these rocks which may be used in interpreting their geological occurrence and correlation.

690038* Probability models for estimating mineral potential Agterberg, FP EGG GP - - X

Obj.: To develop a statistical method employing geological information to assess the probability of occurrence of specific types of mineral deposits in geographically-delineated areas; and thus to focus prospecting in areas of highest potential. To ascertain which geological variables are most closely correlated statistically with occurrence of mineral deposits; and thus to guide mapping and data gathering in various Earth Sciences.

690039* Transport and deposition of ore indicator elements in streams and sediments Nigrini, A EGG G Kee Mack NB X

Obj.: By studying the mechanism of the transport and deposition of ore indicator elements in streams, stream sediments and organic material to provide concepts for the development of new geochemical exploration methods and the means for interpreting geochemical surveys

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact.
690040*	Seismic - Beaufort-Mackenzie	Hobson, GD	EG	SM	Mack	106;107;117	X
690041*	Earth science symposium on off-shore Eastern Canada	Hood, PJ	EG	MM	-	-	X
690042*	Paleomagnetic studies of radio-metrically dated igneous rocks in the Cordillera	Symons, DTA	EG	RM	Yk BC	-	X
690043*	Quaternary geology inventory, southern Labrador	Fulton, RJ	QRG	RSP	Nfld	3;13;Pts 23 A,B,G,H-J,0	X
690044	Fossil mosses in the Arctic	(Kuc, M)	QRG	PG	Frank, Mack	-	X

Obj.: To acquire seismic data in the Mackenzie Delta-Beaufort Sea area probably through participation surveys and to provide the 3rd dimension required by I.S.P.G. geologists to interpret sedimentation and structural history of the area

Obj.: A symposium to summarize our present knowledge of the underlying geology of offshore Eastern Canada, including the Labrador Sea, and the adjacent Continental land mass. The format would be essentially the same as for the 1968 Hudson Bay Symposium and the GSC would publish a Proceedings volume

Obj.: To establish a reliable paleomagnetic pole path with its reversal pattern and intensity variation from the Paleozoic to present for the Cordillera and thereby: (a) to provide a reference for paleomagnetic dating of units of unknown age; (b) to establish correlations between units; and (c) to check for gross tectonic movements of the Cordillera relative to the rest of North America

Obj.: To map and explain Quaternary deposits and landforms in order to provide: (1) areal geologic and geomorphic data; and (2) knowledge of stratigraphy, age, and history of Quaternary features. The project will involve development of a system of mapping (scale 1:250,000), designed to permit accelerated coverage and to meet particularly the need of forestry (ARDA) land capability surveys for geologic-geomorphic information.

Obj.: 1. To provide information on age and environment of origin of Beaufort, interglacial, and post-glacial deposits in the western Arctic, through identification of fossil mosses and other organic remains and study of fossil floras. 2. To develop and illustrate a method for biostratigraphic and paleoecologic analyses of postglacial Arctic peat profiles.

Project Number Title Project Leader Div. Sect. Prov. NTS Act. Inact. 70-71 70-71

690045* Glacial-interglacial stratigraphy, James Bay Lowland Skinner, RG QRG RSP Que Pts 32,42,43 X

Obj.: Through investigation of the Quaternary deposits and associated organic remains, to determine the age, nature and stratigraphic relationships of the interglacial and glacial deposits and the sequence of environments and events they represent, and to provide areal geological information including data applicable to land resource planning

690046* Quaternary reconnaissance north-west District of Mackenzie, Stage II Hughes, OL QRG RSP Mack 86 C,D,E;96 A-H;106 A, G,H X

Obj.: To map and explain Quaternary deposits and landforms in order: (1) to establish their stratigraphic sequence and age and to outline the Quaternary history of the area; and (2) to provide areal geological information including data applicable to permafrost and engineering studies

690047* Quaternary geology, Beaufort-Mackenzie Rampton, V QRG RSP Mack Yk 97 F;107 B-E;117 A,C,D X

Obj.: To map and explain Quaternary deposits and landforms in order to: (1) establish their sequence and age and outline the history of preglacial, interglacial, glacial, and post-glacial events; and (2) provide areal and stratigraphic geological information including data applicable to permafrost and engineering studies and petroleum development

690048 Soils in glaciated and unglaciated terrain Rutter, NW QRG RSP Yk Pt 115 P X

Obj.: To characterize soils (pedology) in the central Yukon, with particular reference to the contrast between soils in glaciated and unglaciated regions; develop a technique for differentiating soils developed in situ from those developed on transported material

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact.
690049*	Quaternary geology, Pine Pass-Jasper	Rutter, NW	QRG	RSP	BC Alta	Pts 93 H,I,J,P,O, 83 E,L	X
690050*	Microdeposits as a probabilistic indicator of ore potential	Cameron, EM	EGG	G	-	-	X
690052*	Wisconsin stratigraphy, north shore of Lake Erie	(Dreimanis, A Prof)	QRG	RSP	Ont	Pt 40 I	X
690054*	Erosion in a permafrost environment	Heginbottom, JA	QRG	EGG	Mack	Pt 107 B,C	X

Obj.: To conduct a reconnaissance of Quaternary and geomorphic features of the Rocky Mountains and adjacent terrain and to map and explain the Quaternary deposits and landforms in major valleys and in other appropriate parts of your project area, in order to determine the chronologic sequence of Quaternary events, to study the geomorphic evolution of the terrain, and to gather areal information including data applicable for land capability inventory and erosion prediction

Obj.: To determine the frequency distribution of metallic elements in barren and host rocks of known ore potential for the purpose of: (a) developing geochemical methods for forecasting the ore potential of a belt or rock unit; (b) developing methods that may be applied to exploration for buried ore deposits by drilling on a probabilistic basis; (3) developing methods of obtaining, interpreting and presenting geochemical and geological data such that they may be used for making statistical investment decisions

Obj.: To determine the age, nature and stratigraphic relationships of the Wisconsin deposits and the sequence of environments and events they represent

Obj.: To document the nature, extent, and rate of erosion in permafrost areas disturbed by activities of man, and to determine the importance of surface material, geomorphology microclimate, snow cover, vegetation, depth of active layer, ground ice distribution and other factors on controlling erosion

Project Number Title Project Leader Div. Sect. Prov. NTS Act. Inact. 70-71 70-71

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|---------|---|-----------------|-----|-----|---------|--------------------|--|---|
| 690055* | Quaternary geology, Arnprior | Minning, G | QRG | RSP | Ont,Que | 31 F/8 | | X |
| | Obj.: To map, describe and explain the Quaternary deposits and landforms in order to provide: (1) areal information; (2) knowledge of the Quaternary stratigraphy and chronology of the area; (3) background information applicable to soils mapping, engineering, and groundwater; and (4) data applicable to environmental geology studies as requested by the Ontario Department of Mines | | | | | | | |
| 690060 | Geochronology of the Canadian Shield | (Stockwell, CH) | CG | SP | - | - | | X |
| | Obj.: To assess the geological significance of past geochronological studies of the Canadian Shield and to prepare recommendations on future requirements as well as methods of achieving them | | | | | | | |
| 690061* | Operation Penny Highlands | Jackson, GD | CG | PS | Frank | Pts 16,26,27,36,37 | | X |
| | Obj.: A reconnaissance geological survey of a previously unmapped area to describe and interpret the geological framework and outline areas of potential economic interest | | | | | | | |
| 690062 | Buried Missouri and Red River Valleys in Manitoba | Wyder, JE | QRG | EGG | Man | Pt 62 G-J | | X |
| | Obj.: Through subsurface investigations with the aid of drilling, sidewall sampling, and geo-physics, to map the buried Missouri and Red River valley in southern Manitoba and to determine drift stratigraphy in the valleys. The investigations are expected to provide information on occurrence of potential aquifers in the valleys, on glacial, interglacial and preglacial history of the region, and on the application of surface resistivity techniques | | | | | | | |
| 690063* | Volcanic stratigraphy of Telegraph Creek map-area | Souther, JG | CG | CPM | BC | 104 G | | X |
| | Obj.: To provide information on the age, structure, sequence, relationships, thickness and origin of the bedrock formations with emphasis on the chemical and mineralogical evolution of the volcanic rocks and their role in the concentration of metalliferous deposits | | | | | | | |

690064* Quaternary palynology Mott, RJ QRG PG - - X

Obj.: In connection with research projects headed by other divisional officers, to provide biostratigraphic and paleoecologic information through investigations comprising selection of sampling sites in bogs or lakes, collection of sediment cores, identification of Quaternary pollen and other fossil materials extracted from these and other samples, determination of fossil assemblages and profiles, and interpretation of age, environment of disposition, past climates, etc.

690065* Quaternary geology St. Anthony-Blanc Sablon, Newfoundland Grant, DR QRG RSP Nfld 2 M;12 P(Nfld pt) X

Obj.: To map, describe, and explain the Quaternary deposits and landforms in order to provide:
 (1) areal geological information including data applicable to land inventory surveys, engineering development, and geochemical mineral exploration surveys; and (2) knowledge of stratigraphy and age of Quaternary features and of history of Quaternary events and environments including glaciation, deglaciation, local sea-level change

690066* Federal-Provincial Aeromagnetic Surveys - British Columbia MacLaren, AS EG SP BC 82 E,F,G W $\frac{1}{2}$;Pts 82 L, M;92 H;Pts 92 I,J X

Obj.: To provide aeromagnetic maps to aid in mineral exploration and geological mapping; to lay down technical specifications and administer contracts with various geophysical companies, and to ensure that specifications are adhered to in order to produce aeromagnetic maps at scales of 1:63,360 and 1:253,440

690067 Federal-Provincial Aeromagnetic Surveys - Yukon, N.W.T. MacLaren, AS EG SP Mack 76 L,N;86 N $\frac{1}{4}$,A,B,C, E-P;105 M;106 C,D N $\frac{1}{2}$,E, F;116 A N $\frac{1}{2}$,B N $\frac{1}{2}$,N $\frac{1}{2}$ F-H Yk X

Obj.: To provide aeromagnetic maps to aid in mineral exploration and geological mapping; to lay down technical specifications and administer contracts with various geophysical companies; and to ensure that specifications are adhered to in order to produce aeromagnetic maps at scales of 1:63,360 and 1:253,440

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
690068*	Federal-Provincial Aeromagnetic Surveys - Keewatin and Mackenzie, N.W.T.	MacLaren, AS	EG	SP	Kee Mack	N $\frac{1}{2}$ 55 M-O;56 A-P;N $\frac{1}{4}$ 65 F,G;65 J-P;66 A-P;75 P	X
	Obj.: To provide aeromagnetic maps to aid in mineral exploration and geological mapping; to lay down technical specifications and administer contracts with various geophysical companies; and to ensure that specifications are adhered to in order to produce aeromagnetic maps at scales of 1:63,360 and 1:253,440						
690069	Federal-Provincial Aeromagnetic Surveys - Saskatchewan	MacLaren, AS	EG	SP	Sask	63 E,L,M;73 F-J,K E $\frac{1}{2}$,N E $\frac{1}{2}$, 0	X
	Obj.: To provide aeromagnetic maps to aid in mineral exploration and geological mapping; to lay down technical specifications and administer contracts with various geophysical companies; and to ensure that specifications are adhered to in order to produce aeromagnetic maps at scales of 1:63,360 and 1:253,440						
690070*	Federal-Provincial Aeromagnetic Surveys - Central Baffin Island	MacLaren, AS	EG	SP	Frank	16 K-M;26 I-P;27 A-D;36 P; 37 A,B	X
	Obj.: To provide aeromagnetic maps to aid in mineral exploration and geological mapping; to lay down technical specifications and administer contracts with various geophysical companies; and to ensure that specifications are adhered to in order to produce aeromagnetic maps at scales of 1:63,360 and 1:253,440						
690071*	Federal-Provincial Aeromagnetic Surveys - Northern Baffin Island	MacLaren, AS	EG	SP	Frank	Pts 27 C,D;37 C-H;38 B	X
	Obj.: To provide aeromagnetic maps to aid in mineral exploration and geological mapping; to lay down technical specifications and administer contracts with various geophysical companies; and to ensure that specifications are adhered to in order to produce aeromagnetic maps at scales of 1:63,360 and 1:253,440						

Project
Number

Project
Leader

Title

Div. Sect. Prov.

NTS

690072* Federal-Provincial Aeromagnetic Surveys - Labrador and S. Baffin Island
MaLaren, AS EG SP Frank 13 A-O;14 B-F,L,M;16 E; 23 A,B,G-J,Pt O,P;24 A,H,I,P;25 A,I-P;26 A-H;35 P; 36 A-I
Nfld

Obj.: To provide aeromagnetic maps to aid in mineral exploration and geological mapping; to lay down technical specifications and administer contracts with various geophysical companies; and to ensure that specifications are adhered to in order to produce aeromagnetic maps at scales of 1:63,360 and 1:253,440

690073* Federal-Provincial Aeromagnetic Surveys - Quebec
MaLaren, AS EG SP Que 23 C,E,F,K,L,N,Pt M,O,P; 24 A W₁,B,C;32 L-O;33 B-L

Obj.: To provide aeromagnetic maps to aid in mineral exploration and geological mapping; to lay down technical specifications and administer contracts with various geophysical companies; and to ensure that specifications are adhered to in order to produce aeromagnetic maps at scales of 1:63,360 and 1:253,440

690075* Tertiary Foraminiferal succession of western Cordillera and Pacific Margin
Cameron, B CG CPM BC Pts 92,93,102,103

Obj.: To determine the foraminiferal succession within the Tertiary sedimentary rocks of the Western Cordillera and Pacific Margin in order to establish a biostratigraphic standard of reference

690076 Iron-formation facies in Superior type iron formations in the Knob Lake area
(Zajac, IS) EGG MD Que 23 J
Nfld

Obj.: To obtain a better understanding of the sedimentary environment and origin of these ferruginous sediments and to acquire fundamental geological information necessary for evaluation of the iron formations as potential taconite ore

Project Number Title Project Leader Div. Sect. Prov. NTS Act. Inact. 70-71 70-71

690077 Iron-formations in the Timagami Lake area, Ontario (Wilton, HP) EGG MD Ont 31 NW;41 NE X

Obj.: To study primary depositional features, variations in chemical composition and sedimentary facies, stratigraphic and structural features with the view of interpreting the nature of the depositional environment and origin of these beds. The distribution and lithology of rocks associated with the iron formation are to be examined to provide an understanding of the geological environment in which this iron-formation was deposited

690078 Petrographic norms-clastic rocks of the western Canadian sedimentary basin Rapson-McGugan, JE ISPG PS Mack, Yk BC, Alta Sask, Man - X

Obj.: Determine petrographic norms of representative clastic rocks from western Canada and investigate possible significance of the components and cement with respect to evolution of the miogeosyncline

690079 Condensate deposits of Late Paleozoic to Mesozoic age Rapson-McGugan, JE ISPG PS BC Alta - X

Obj.: Study the nature of condensate deposits and the erosion surfaces involved

690082 Late Quaternary uplift, southeast Hudson Bay (Hazelton, GM Prof) QRG PG Que Pts 34 W $\frac{1}{2}$, 33 NW X

Obj.: Through investigation of the raised shoreline and offshore forms and deposits between present sea level and the limit of submergence to determine the pattern and rate of uplift and tilt and the sequence of late glacial and postglacial events

690083 Investigation of Lower Jurassic genus Weyla as a guide fossil in British Columbia Tipper, HW CG CPM BC - X

Obj.: To establish the value and feasibility of using the genus Weyla as a guide fossil in British Columbia, to describe and to determine the stratigraphic range of the several species believed to be present

Project Number Title Project Leader Div. Sect. Prov. NTS

690084 Study of copper, nickel, silver and uranium deposits of the Shield immediately northwest of Lake Superior (Franklin, JM) EGG MD Ont 52 SE X

Obj.: To determine and describe the composition, internal structure and geological setting of deposits of the above minerals in Proterozoic and Archean rocks

690085 BCRA survey of the accuracy of ceramic analyses Maxwell, JA EGG Adm - - X

Obj.: To collaborate, at the invitation of the British Ceramic Research Association, in a second survey of the accuracy of ceramic analysis, by analyzing eight prepared silicate samples by current methods and techniques, and reporting the data to them for correlation and evaluation together with data received from other laboratories

690086 Scientific Adviser and editor, Geological Atlas Douglas, RJW ADM SP - - X

Obj.: To make recommendations to a steering committee concerning technical and scientific matters required to ensure the publication of a suitable 1:1,000,000 geological atlas of Canada by 1974, including recommendations on coordination, scheduling, guidelines, legend and format; and to ensure, through scientific editing of all manuscripts, that approved standards are met

690087 Summary of the Geology of Canada Douglas, RJW ADM SP - - X

Obj.: Summary paper for Elsevier Publishing Co. "Atlas" dealing with Earth Science in Canada to be published prior to the I.G.C.

690088 1:15 million Geological Map of Canada Douglas, RJW ADM SP - - X

Obj.: To prepare a 1:15 million geological Map of Canada for publication in the Atlas of Canada by the "Geographic Branch"

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS
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690089	Analysis of international reference samples	Abbey, S	EGG	AC	-	X
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Obj.: To participate in international collaborative analysis of reference samples, prepared by geological institutions throughout the world, thereby contributing to the establishment of such samples as calibration standards and as references for checking analytical methods

690090	Development of methods for the analysis of geological materials	Abbey, S	EGG	AC	-	X
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Obj.: To develop, modify and improve methods for the analysis of geological materials, using chemical and instrumental methods

690091*	Mercury in soil gas applied to exploration for sulphide ores	(Jonasson, IR PDF)	EGG	G	Ont	X
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Obj.: The project objective is to investigate the soil chemistry of mercury to help more fully exploit mercury as a pathfinder element to base metal ore bodies

690093	Relationship of structural lineaments and mineral occurrences in the Abitibi area of the Canadian Shield	(Kutina, J Prof)	EGG	MD	Ont 4? SE; 41 NE; 31 NW Que	X
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Obj.: To investigate relationships of mineral deposits to geological structures in the belt of Archean and Proterozoic rocks extending from Sault-Ste. Marie to Lake Mistassini in the eastern part of the Superior Province; to test concepts on the structural control of ore deposits; and where possible define parameters affecting the distribution of mineral occurrences that may be evaluated further by statistical methods of study for prediction of ore potential in the regions which are being developed in Dr. Agterberg's project - 690038

690095	Properties and provenance of till	(Shilts, WW PDF)	QRG	EGG	-	X
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Obj.: To study the physical and chemical properties of till in order to identify and characterize the parameters that are significant in stratigraphy, correlation and history, engineering and mineral tracing

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
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700001	Canadian Paleozoic Acritarcha	(Rice, HMA)	CG	EP	-	-	X
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Obj.: To identify Paleozoic Acritarch collections now on hand for the purpose of determining their composition and stratigraphic value within the Hudson Bay Lowland

700002	Bedrock topography southwestern Manitoba	Klassen, RW	QRG	RSP	Man	62 F,G,K,N,pts 62 H-J,O,P	X
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Obj.: To prepare a regional map to illustrate the present state of knowledge regarding the bedrock topography of southwestern Manitoba. The map is also to show drift thickness, defined and presumed location of buried valleys, and contacts of bedrock formations and is to provide background data relative to groundwater investigations, engineering problems, and the search for industrial minerals.

700003	Kootenay River (NTS 82) map-area. 1:1 million Geological Atlas Program	Wheeler, JO	CG	CPM	BC	82 Alta	X
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Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as Apr. 1, 1969 of File 116-6-4

700004	Fraser River (NTS 92) map-area. 1:1 million Geological Atlas Program	Roddick, JA	CG	CPM	BC	92	X
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Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as Apr. 1, 1969 of File 116-6-4.

700005	Iskut River (NTS 104&114) map-area. 1:1 million Geological Atlas Program	Souther, JG	CG	CPM	BC	104;114	X
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Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as Apr. 1, 1969 of File 116-6-4.

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act.	Inact.
700006	Skeena River (NTS.103) map-area. 1:1 million Geological Atlas Program	Hutchison, WW	CG	CPM	BC	103	X	
	Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of 1:1 million geological atlas of Canada. More detailed objectives are as Apr. 1, 1969 of File 116-6-4.							
700007	Parsnip (NTS.93) map-area. 1:1 million Geological Atlas Program	Tipper, HW	CG	CPM	BC	93	X	
	Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as Apr. 1, 1969 of File 116-6-4.							
700008	St. Mary's River (NTS 11) map-area. 1:1,000,000 Geological Atlas Program	Poole, WH	CG	AELAM	NS,PEI	11	X	
	Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as April 1, 1969 of File 116-6-4.				Nfld			
700009	S. Ontario (NTS 30,31,40,41) map-area. 1:1 million Geological Atlas Program	Sanford, BV	CG	AELAM	Ont	30;31;40;41	X	
	Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as April 1, 1969 of File 116-6-4.				Que			
700010	Gatineau River (NTS. 31) map-area. 1:1,000,000 Geological Atlas Program	Baer, A	CG	PS	Ont	31	X	
	Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as April 1, 1969 of File 116-6-4.				Que			

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
700011	Gatineau River (NTS 31) map-area. 1:1,000,000 Geological Atlas Program	Poole, WH	CG	AELAM	Que,NB NS	21	X
	Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as April 1, 1969 of File 116-6-4.						
700012	Athabasca River (NTS 83) map-area. 1:1 million Geological Atlas Program	Ollershaw, NC	ISPG	SG	BC Alta	83	X
	Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as April 1, 1969 of File 116-6-4.						
700014*	Mineral indicator tracing, southern Keewatin	(Shilts, WW, PDF)	QRG	EG&G	Kee	55 E,F,K,L(mainly)	X
	Obj.: To determine the dispersion pattern of rock, mineral and chemical components of eskers and till relative to their source in the bedrock, with particular reference to the application of this knowledge in delineating geological bodies masked by the drift and in the search for mineral deposits						
700015*	Yellowknife and Hearne Lake map-areas, Dist. of Mackenzie	Henderson, JB	CG	PS	Mack	85 I,J	X
	Obj.: To revise and interpret the geology and economic potential of the Precambrian terrain of the project area known only through earlier gross reconnaissance						
700016*	Plaster Rock map-area, N.B.	Skinner, R	CG	AELAM	NB	21 J/14	X
	Obj.: To determine the stratigraphy, structure, and igneous, metamorphic, and tectonic history of a portion of the central Mineral Belt of New Brunswick, as an aid to the economic development of the area						

700017 Paleomagnetism - Appalachian Province Larochele, A EG RM Que NB 22,21,12,11,2,1 X

Obj.: (1) to extend knowledge of pole positions into the Paleozoic; (2) to attempt identifying major periods of intrusion in Appalachian province on the basis of paleomagnetism; and (3) contribute to the structural history of the Appalachian province and/or of specific areas within them - e.g. rotation of N.F. problem

700018 Paleomagnetism & rock magnetism: Instrumentation and technological development Larochele, A EG RM - - X

Obj.: To contribute to the development of paleomagnetism as a geophysical method

700019 Biostratigraphic study of Mesozoic and Cenozoic phytoplankton and Cenozoic pollen and spores from the Sverdrup Basin and adjacent regions Cox, RL ISPG WP Frank 560;340;99;89;79;69; 59;49;98;88;97;87;107 X

Obj.: (1) To provide a temporal framework for correlating Mesozoic and Cenozoic rocks of northern Canada and for dating geologic events within these eras. (2) To establish palynology reference section. (3) To distinguish marine from non-marine facies. Such distinctions are useful for locating potential stratigraphic traps that result from facies changes.

700020 Federal-Provincial Aeromagnetic Surveys - Newfoundland MacLaren, AS EG SP Nfld 1 K,L,N;11 O,P X

Obj.: 1. To provide aeromagnetic maps to aid in mineral exploration and geological mapping. 2. To lay down technical specifications and administer contracts with various geophysical companies. 3. To ensure that the specifications are adhered to in order to produce aeromagnetic maps at a scale of 1:63,360 and 1:253,440.

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
700023	Federal-Provincial Aeromagnetic Surveys - British Columbia	MacLaren, AS	EG	SP	BC	Pts 82 L,M,92 I,P,93 A, E,F,K,L;93 M;Pts of 93 N; 94 D W ₂ ,103 P	X
	Obj.: 1. To provide aeromagnetic maps to aid in mineral exploration and geological mapping. 2. To lay down technical specifications and administer contracts with various geophysical companies. 3. To ensure that the specifications are adhered to in order to produce aeromagnetic maps at a scale of 1:63,360 and 1:253,440.						
700025*	Operation Snag-Yukon	Tempelman-Kluit, D	CG	CPM	Yk	115 O WL/3,115 N E ₂ ,115 H,115 K E ₂	X
	Obj.: To provide geological information on the age, sequence, structure, relationships, thickness and origin of the bedrock formations and on the origin mode of occurrence and economic potential of the associated mineral deposits						
700026	Cordilleran volcanic project	Souther, JG	CG	CPM	Yk,BC	115; 105; 104; 103; 93;92	X
	Obj.: To interpret data on volcanism on the Cordillera from other Survey projects and outside sources in order to advise and assist departmental geologists, other scientists and the public and industry with problems related to volcanology						
700027*	Comparative studies of ancient and modern sedimentary environments	Stott, DF	ISPG	MS	-	-	X
	Obj.: To compare various modern sediments with similar deposits encountered in ancient rocks as an aid in the determination of environments of deposition of the latter; and by such identification to assess the economic potential and to differentiate reservoir rock areas from non-reservoir rock areas						
700028*	Quaternary reconnaissance, Devon Island	Blake, W Jr	QRG	RSP	Frank	38 F,G;48 E-H;58 E-H; 59 A-C;69 A,D	X
	Obj.: Reconnaissance mapping of glacial deposits, landforms, and other Quaternary features in order to provide descriptive data on the Quaternary geology and geomorphology of the assigned area; to determine the chronology of events during glaciation and deglaciation; and to gather information on marginal fluctuations of glaciers, modern geologic processes, and changing environments						

Project Number Title Project Leader Div. Sect. Prov. NTS

700029* Operation Peel Sound stratigraphy and structure of Prince of Wales Island, adjacent small islands, and localities on Stefansson Island, Somerset Island, and Boothia Peninsula
Christie, RL ISPG AI Frank 67 D,E,G,H;68 A-E; 78 D;58 B,C,F X

Obj.: (a) To improve the understanding of the stratigraphic framework of the Paleozoic rocks of Prince of Wales Island; especially in terms of: (i) facies relationships; (ii) stratigraphic correlations with formations in the adjacent 'shelf' region and in the Franklinian Geosyncline. This understanding will aid in the petroleum exploration about to begin in adjacent sedimentary basins and on Prince of Wales Island.
(b) To determine the tectonic history of the Boothia Uplift: (i) such knowledge will be of vital importance in the petroleum exploration of the regions to the east, west, and north of the exposed Boothia Uplift; (ii) more data on the major structure, the Boothia Uplift, will contribute to better understanding of the structure and history of the continent.

700030 Lancaster Sound (NTS 48,58) map-area 1:1 million Geological Atlas Program
Christie, RL ISPG AI Frank 48;58 X

Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as April 1, 1969 of File 116-6-4.

700031 Victoria Strait (NTS 67,77) map-area. Christie, RL ISPG AI Frank 67;77 X

Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as April 1, 1969 of File 116-6-4.

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact.
700032	Thomsen River (NTS 88;98) map- area. 1:1 million Geological Atlas Program	Christie, RL	ISPG	AI	Frank	88;98	X
700033*	Quaternary geology of the southern Canadian Cordillera - IGC Field Excursion A 02, C 02	Fultin, RJ	QRG	RSP	BC	Pts 82,92	X
700034*	Devonian biostratigraphy of northern Yukon Territory and adjacent District of Mackenzie	Norris, AW	ISPG	PS	Mack Yk	106 W $\frac{1}{2}$; 116 E $\frac{3}{4}$; 117 S $\frac{1}{2}$	X
700035*	Erosion studies in an area of intensive petroleum exploration and development	St-Onge, DA	QRG	EGG	Alta	Pts 83 J,0	X

Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as April 1, 1969 of File 116-6-4.

Obj.: To prepare and conduct an IGC field excursion, including selection of the routes, preparation of a guidebook and organization of the logistics

Obj.: To include (a) delineation of facies distribution of Devonian rocks in area; (b) identifying and determining ranges of fossils for refining correlations with other areas, determining distribution of faunal provinces and paleogeography of Devonian seas; and obtaining more information on the Upper Silurian and Lower Devonian, an interval particularly well represented in the southern part of the area

Obj.: To assess the terrain disturbance resulting from intensive petroleum exploration and development and associated deforestation; and to determine the nature, rate and controls of erosion and other processes involved in this terrain disturbance

Project Number Title Project Leader Div. Sect. Prov. NTS

700036* International Geographical Union, 1972 Field Symposium, Commission of Geomorphological Survey and Mapping St-Onge, DA QRG EGG Alta Sask Pts 72 E,F X

Obj.: To prepare and conduct an International Geographical Union field symposium, including selection of the route, preparation of a guidebook and organization of logistics

700037 Geology of the southern Alberta Foothills, Bow River to Clearwater River Ollerenshaw, NC ISPG SG Alta 82 O/6,7,10,11,13,14 X

Obj.: Are designed to facilitate and assist the mineral evaluation and oil and gas development of the area. They involve the publication of fundamental geological data, including: geological maps on a scale of 1:50,000 integrated surface and subsurface geology; the description, age determination, and correlation of all major rock units; the description, genesis and relationships of the major structural elements of the area.

700038* IGC field trip AC63 "Appalachian tectonic elements" Poole, WH CG AELAM Que,NB NS,Nfld - X

Obj.: To demonstrate the various tectonic elements which prevailed during the evolution of Appalachian geosyncline in Canada, to IGC excursion participants in 1972

700039* Paleozoic geology of eastern Ontario Sanford, BV CG AELAM Ont 31 G,ppts of B,C,F X

Obj.: To determine the stratigraphy, structure and regional correlation of Paleozoic strata of eastern Ontario as an aid to the development of petroleum and mineral resources

700040 Eureka Sound-Robeson Channel (NTS) 340,560,120 map-area. 1:1 million Geological Atlas Program Trettin, HP ISPG AI Frank 340,560,120 X

Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as Apr. 1, 1969 of File 116-6-4.

X

700041* Mineralogy of porphyry deposits of Cu and Mo in Canada
 Jambor, JL EGG M - -
 Obj.: To determine the relationship of ore minerals to alteration zones and variations in alteration zones, as an aid to exploration and development; (2) to contribute mineralogically based concepts to interpretation of genesis and provenance of these deposits, useful in identifying favourable geological environments for these deposits

X

700042 Jones Sound (NTS. 29,39,49) map-area 1:1 million Geological Atlas Program
 Kerr, JW ISPG AI Frank 29;39;49

Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as Apr. 1, 1969 of File 116-6-4.

X

700043 Viscount Melville Sound (NTS. 68,78) map-area. 1:1 million Geological Atlas Program
 Kerr, JW ISPG AI Frank 68;78

Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as Apr. 1, 1969 of File 116-6-4.

X

700044* I.G.C. Field trip A03-C03
 Monger, JWH CG CPM BC 92 H W $\frac{1}{2}$
 Obj.: To determine and describe sites of geological interest to be visited on Field trip A03-C03 in the Hope area

X

700045 Belcher Channel and Ballantyne Strait (NTS. 59,69,79,89,99) map-area. 1:1 million Geological Atlas Program
 Nassichuk, WW ISPG AI Frank 59;69;79;89;99

Obj.: To publish a modern compilation and synthesis of the geology of the map-area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as April 1, 1969 of File 116-6-4.

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act.	Inact.
700046*	Development of regional geochemical exploration methods for Permafrost areas	Allan, RJ	EGG	G	Mack	86 N/8,9,pts 1,2,6,7,10, 11,15,16;86 O,pts 4,5,12, 13	X	
	Obj.: (1) To develop, test, and demonstrate the feasibility of geochemical methods suitable for reconnaissance prospecting in permafrost regions, and thus to provide industry with geochemical methods for outlining areas having an anomalously high content of economic elements in those regions with permafrost; (2) to investigate the fundamental problems involved in application of geochemical prospecting methods in regions and permafrost							
700047*	Operation Finlay	Gabrielse, H	CG	CPM	BC	94 C E $\frac{1}{2}$, F W $\frac{1}{2}$, E	X	
	Obj.: To establish the stratigraphy, structure and geologic history; to establish the geological framework to which the mineral deposits may be related as an aid to regional development							
700048*	Petrology and structure of Daly Bay Complex and environs	Gordon, TM	CG	P	Kee	56 A S $\frac{1}{2}$,pts of 55 P, 46 D	X	
	Obj.: To determine the petrology and structure of the anorthosite-gabbro-gneiss-granulite complex in the Daly Bay region in order to provide an understanding of the origin, age, and stratigraphic relations within the complex as well as to the surrounding gneisses							
700049*	Environmental geology prototype study - Ottawa-Hull region	Scott, JS	QRG	EGG	Ont Que	Pts 31 F,G	X	
	Obj.: To develop methods of compiling, evaluating, and presenting geological information concerning urban growth areas to meet the needs of engineering and planning, using the Ottawa area as a prototype for this study. To prepare a comprehensive source of information (maps report, and/or data file), designed to serve as background for planning and development in the Ottawa area, illustrating: (1) distribution, thickness and physical properties of surficial and bedrock materials; and (2) magnitude and effect of active geological processes							
700050*	Structural prototypes, scale models	Norris, DK	ISPG	SG	BC,Alta	82 G,H,J,O & U.S.A.	X	
	Obj.: Through a better understanding of the geometry and mechanics of faults and folds to assist the coal industry in its search for, and safe exploitation of mineable reserves, and the oil industry in its delineation of structural traps							

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	X
700051	Blairmore, Carbondale River, Livingstone River and Beehive Mountain map-areas	Norris, DK	ISPG	SG	BC Alta	82 G/9 W $\frac{1}{2}$, 8 W $\frac{1}{2}$, J/1 W $\frac{1}{2}$, 2 E $\frac{1}{2}$	X
700052*	Obj.: Assess the coal and hydrocarbon potential of the area by means of the structural geometry and stratigraphy of the bedrock formations Volcanic study in the Ennadai Belt, Keewatin	Ridler, RH	CG	PS	Kee	Pts 55 W $\frac{1}{2}$, 65 E $\frac{1}{2}$	X
700053*	Obj.: To determine and analyse the Archean stratigraphy of the areas, and its relationship to metallogeny and mineralization. To reconstruct the depositional history and evolution of the sequences. To assess the mineral potential of the Archean terrain and establish guides for future mineral exploration. Quaternary geology, Winnipeg (East half)	Fenton, MM	QRG	RSP	Man	62 H E $\frac{1}{2}$	X
700054*	Obj.: To map, describe and explain the Quaternary deposits and landforms in order to provide (1) areal information; (2) knowledge of the Quaternary stratigraphy and chronology of the area; and (3) background information applicable to soils and mapping, engineering, groundwater, etc., bearing in mind the proximity of the project area to metropolitan Winnipeg Thermomagnetism of single minerals and rocks	Schwarz, EJ	EG	RM	-	-	X

Obj.: Aid in the interpretation of magnetic anomalies and of paleomagnetic results; provide unique information on the thermomagnetic history of Canadian rocks and ore deposits; and obtain information on the intensity of the paleomagnetic field

Project Title Div. Sect. Prov. NTS

Project Number Leader Title Div. Sect. Prov. NTS

700055 A report on the geology of chromium deposits in Canada
 Obj.: To prepare a report on the geology of chromium deposits in Canada which will provide a geological basis for guiding exploration and assessment of chromium potential in Canada. The report is to include a classification of deposits and criteria for recognizing each type, a review of the geochemistry and mineralogy of chromium deposits, their geological environment, provenance and genesis and indicate regions and geological units in Canada most favourable for the occurrence of each type of deposit.

700056* Surficial geology, southern Cape Breton Island Grant, DR QRG RSP NS Pt 11 F X

Obj.: To map, describe and explain the surficial deposits and landforms in order to provide:
 (1) areal geological information with particular reference to the needs for data required for industrial development and mineral exploration; and (2) knowledge on the stratigraphy and age of Quaternary features and of the history of Quaternary events and environments including glaciation, deglaciation and local sea-level change

700057* Airborne geochemistry Darnley, AG EG RS - - X

Obj.: To develop methods of obtaining from the air information about the chemical composition of the ground; and to select the methods most pertinent to the objectives of the Geological Survey on the basis of long term cost-effectiveness

700058* Quaternary stratigraphy, south Saskatchewan Valley in southwest Saskatchewan (Karrow, PF) QRG RSP Sask Pt 72 K,N X

Obj.: To determine the nature, stratigraphic succession and age of Quaternary deposits exposed along the south Saskatchewan Valley in southwestern Saskatchewan and to correlate with the surface and subsurface stratigraphic successions recognized in the region

Project Number Title Project Leader Div. Sect. Prov. NTS

700059* Geology of copper and molybdenum deposits Kirkham, RV EGG MD - - X

Obj.: To carry out comprehensive research on the geology of copper and molybdenum deposits in order to provide a geological basis for exploration and assessment of copper and molybdenum potential in Canada. The research is to provide: (1) a systematic record and appraisal of geological data; (2) a geological classification of copper and molybdenum deposits; (3) definition of criteria for recognition of each type of deposit; (4) development of concepts and hypothesis on geological environment, provenance, and genetic processes of copper deposits; and (5) determination of regions and geological units in Canada most favourable for the occurrence of each type of deposit.

700060 Devonian and older Paleozoic rocks, southern and central District of Mackenzie MacKenzie, WS Mack 95 A-C,F-K,N-P;85 C-F, K-N X

Obj.: To prepare for publication correlation charts and columnar sections of Devonian and older Paleozoic rocks and to select rock units for isopach and lithofacies maps that will elucidate the tectonic and depositional history of the basin

700061* Seismic - Precambrian Shield Overton, A EG SM - - X

Obj.: To apply seismic refraction and reflection methods to solution of geological problems in the Precambrian Shield. To apply sonic methods to downhole environments. To apply sonic methods to such problems as subsurface structure, boundaries between geological provinces, interfaces between geological formations, definition of orebodies, delineation of Conrad discontinuity, etc.

700062* Feasibility pilot study of geo-chemical reconnaissance methods in the Ennadai-Rankin Belt Hornbrook, EHW EGG G Kee 55 L X

Obj.: To determine: (a) which geochemical reconnaissance methods are most effective in delineating areas which have greatest economic potential for prospecting; (b) to compare effectiveness of these methods with studies of eskers and tills being made under 700014; and (c) to determine costs of the various methods at different densities of sampling

Project Number Title Project Leader Div. Sect. Prov. NTS Act. Inact. 70-71. 70-71

700063* AAPG field trips, June 1970 Chamney, TP ISPG WP Alta 82 P X

Obj.: To assist in the organization of the field trips of the convention and to lead two such excursions in the Cretaceous and Cenozoic rocks of southeastern Alberta

700064 Foraminiferal zonation of the Mesozoic and lower Cenozoic rocks of the Mackenzie Delta and adjacent Arctic Coastal Plain Chamney, TP ISPG WP Yk 97 B,C,F;107 A-D;117 A X

Obj.: Detailed biostratigraphic subdivision of the Mesozoic and lower Cenozoic rocks

700065* Petrological studies in the vicinity of the Kisseynew Front Froese, E CG Pet Man 63 K/16 E½,63 J/13 W½ X

Obj.: To determine the metamorphic reactions and isograds associated with the Kisseynew Front as a contribution to the understanding of metamorphism in Precambrian orogenic belts and its effect on mineral deposits

700066 Lithostratigraphic studies of Upper Cretaceous formations encountered in CPOG Strathmore well Havard, CJ Mrs ISPG SG Alta 82 P X

Obj.: To provide a lithostratigraphic record of the formations encountered in the Strathmore well as a basis for future palynological, geochemical, micropaleontological and sedimentary petrological studies by scientists in industry and elsewhere

700067* Mica group minerals and related silicates in Canadian mineral deposits Rimsaite, JYH EGG M - - X

Obj.: To ascertain whether and how variations in characteristics of these minerals can be used to determine age and genetic relationships of mineral deposits and thus assist mineral exploration

Project Title Div. Sect. Prov. NTS

700068* Basin analysis of exposed Mesozoic and Tertiary strata in northern Yukon Territory in relation to the subsurface stratigraphy of Mackenzie Delta-Beaufort Sea areas
 Young, FG Pts 106 N½, 107, 116 N½, 117
 MS Yk X

Obj.: 1. To elucidate and interpret the economic, tectonic, and historical significance of Mesozoic and Tertiary stratigraphy and sedimentology of northern Yukon Territory and northwestern District of Mackenzie. 2. To determine the relationships of this stratigraphy to the surface Mesozoic stratigraphy of the Mackenzie River Delta, the Beaufort Sea continental shelf, the Alaskan north slope, and the Sverdrup Basin.

700069 A Comprehensive E.G. Series report on the geology of niobium and tantalum in Canada
 Dawson, KR EGG SP - X

Obj.: To prepare a comprehensive reference on current knowledge of the geology of niobium and tantalum in Canada which will provide a geological basis for exploration and for assessment of niobium and tantalum potential in Canada. The report is to include a review of the mineralogy and geochemistry of niobium and tantalum, a review of all major types of deposits in Canada, a classification of these deposits and criteria for recognizing each type, a review of concepts of their geological environment, genesis and provenance, and should indicate regions and geological units in Canada that are most favourable for the occurrence of each type of deposit

700070 Resource satellites and remote airborne sensing (Working group on geology)
 Douglas, RJW ADM SP - X

Obj.: See Terms of Reference as set out by Interdepartmental Committee on Resource Satellites and Remote Airborne Sensing, 5 March 1970

Project Number	Title	Project Leader	Div.	Sect.	Prov.	NTS	Act. Inact. 70-71 70-71
700071	Redstone River (NTS 95) map-area. 1:1 million Geological Atlas paper	Douglas, RJW	ADM	SP	Mack Yk	95	X
	Obj.: To publish a modern compilation and synthesis of the geology of the map area as a unit of a 1:1 million geological atlas of Canada. More detailed objectives are as Apr. 1, 1969 of File 116-6-4						
700072*	Preparation for IGC Field Trip A03-C03	Leech, GB	EGG	MD	BC	82 G W $\frac{1}{2}$	X
	Obj.: To select field trip stops and prepares a road-log for use by participants in the IGC field trips to be conducted in the East Kootenay district of British Columbia						
700073*	Operation northern Melville Peninsula	Heywood, WW	CG	PS	Kee	47 A,B,C,D	X
	Obj.: To determine the general structural, historical and economic geology of a previously unmapped terrain in order to aid in the future economic development of northern Canada						
700074	Operations Back River and Wager	Heywood, WW	CG	PS	Kee	46 D W $\frac{1}{2}$, E, F N $\frac{1}{2}$, G N $\frac{1}{2}$, 47 A S $\frac{1}{2}$, 56 A, B, G, K , N-P, pts of 57, 67, 66 I-K, N-P.	X
	Obj.: To determine the general structural, historical, and economic geologic features of this previously unstudied terrain as a basis for future economic development of this portion of northern Canada						
700075*	Quaternary geology and geomorphology in southern Quebec - IGC field excursion - A44, C44	Gadd, NR	QRG	RSP	Que	-	X
	Obj.: To prepare and conduct an IGC field excursion, including selection of the route, preparation of a guidebook and organization of the logistics						

Project Number

Project Leader

Div. Sect. Prov. NTS

Title

X

83 E

Alta

PS

Mackenzie, WS

Stratigraphy of the southern part of the Devonian Ancient Wall reef-complex, Alberta

Obj.: To determine the stratigraphy of an exposed Upper Devonian carbonate reef complex and the distribution within it of component rock units and their relation to surrounding argillaceous strata, and to achieve comparison with similar carbonate bodies elsewhere

X

-

NB

RSP

QRG

Prest, VK

Quaternary geology, geomorphology and hydrogeology of the Maritime Provinces - IGC field excursion A 61, C 61

Obj.: To prepare and conduct an IGC field excursion, including selection of the route, preparation of a guidebook and organization of the logistics

X

-

-

PS

CG

Baer, AJ

Editor - Workshop-Basins and Geosynclines of the Canadian Shield

Obj.: To edit papers presented at the Workshop on Basins and Geosynclines of the Canadian Shield held (March 17-18, 1970) for publication as a G.S.C. Paper

X

35 J/2,7

Que

EGG

QRG

Code, JA

Oil pollution investigations, Deception Bay

Obj.: To investigate the engineering geology of the site of the oil storage tanks, the causes of the avalanche, the geologic-geomorphic factors relating to shoreline pollution by oil, as well as remedial measures and the geologic-geomorphic implications of such measures

Project Number

7000076

7000077*

7000078

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⁰ This symbol indicates project is inactive during 1970-71

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