CANADA

DEPARTMENT OF ENERGY, MINES AND RESOURCES

GEOLOGICAL SURVEY OF CANADA

CATALOGUE OF SCIENTIFIC PROJECTS

1986 - 1987

OTTAWA
1986

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Compiled by M.A. Petre

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PREFACE

A merger of the Geological Survey of Canada with the Earth Physics Branch of EMR took effect on 1 April 1986.

This catalogue of all scientific projects of the Geological Survey of Canada approved as of August 1986 has been compiled by M.A. Petre of the Geological Survey Program Office. It is arranged to indicate: 1) the total scientific program of the Survey for the period 1 April, 1986 to 31 March, 1987, and 2) the field program for the summer of 1986.

As a catalogue it lists and briefly describes all scientific projects. These total 582 (17 inactive) and are compiled mainly from project annual instructions (GSC 229). Where aspects of the merger had not been completed, information on former EPB projects was derived from available sources (these projects can be found in the Addendum on page 150). Thus the catalogue comprises the current authority on such matters as project numbers, titles and objectives and supersedes previous catalogues and documents concerning scientific projects. Projects are listed: a) in groups reflecting the program activity structure; and b) in numerical order with an index by project leader and by province at the end.

All projects are classified in the Program/Activity structure now in use throughout the Department, this classification appearing in the column "Departmental Classification". Details of this classification follow this preface.

The field program for the summer of 1986 comprises the field component of those active projects marked by an asterisk after the project number. These total 250. No distinction has been made between a minor field component, such as a few days, and a major component requiring the entire field season.

D.G. Benson
Chief Program Officer

Ottawa
1986

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DEPARTMENT OF ENERGY, MINES AND RESOURCES

PROGRAM ACTIVITY STRUCTURE

1. ADMINISTRATION PROGRAM

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3. MINERAL & EARTH SCIENCES PROGRAM

- .1 Mineral Industry Development
- .2 Administration of the Canada Explosives Act
- .3 Mineral and Energy Technology
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  - .9 Activity Management & Support
- .7 Polar Continental Shelf
- .8 Surveying and Mapping
- .9 Program Management and Support

LIST OF ABBREVIATIONS USED

DIRECTOR GENERAL'S OFFICE – DGO

SP – Special Projects

ATLANTIC GEOSCIENCE CENTRE – AGC

EPG – Eastern Petroleum Geology Subdivision
- CG -Coal Geology
- LBG -Labrador-Baffin Group
- PBG -Paleozoic Basin Group
- SGBM -Scotian Grand Banks Margin Group

EMG – Environmental Marine Geology Subdivision
- G -Geochemistry
- P -Paleoecology
- SG -Sedimentary Geology

RR – Regional Reconnaissance Subdivision
- EAOG -Eastern Arctic Offshore Geology
- GPS -Geophysical Surveys
- OBM -Ocean Basins and Margins
- SBG -Surficial and Bedrock Geology

PS – Program Support Subdivision

CORDILLERAN AND PACIFIC MARGIN – CPM

CMG – Cordilleran Mainland Geology
PMG – Pacific Margin Geology

MINERAL RESOURCES DIVISION – MR

MD – Mineral Deposits Subdivision
- MAG -Mathematical Applications in Geology
- MDG -Mineral Deposits Geology
- MRIS -Mineral Resource Information Services
- RMS -Regional Metallogenic Studies
- RMRA -Regional Mineral Resource Assessment

MC – Mineralogy & Chemistry Subdivision
- AC -Analytical Chemistry
- MIN -Mineralogy
- EGp -Exploration Geophysics
- EGc -Exploration Geochemistry

INSTITUTE OF SEDIMENTARY AND PETROLEUM GEOLOGY – ISPG

CG – Coal Geology Subdivision
- CG -Coal Geology
- CT -Coal Technology
- RE -Resource Evaluation

PG – Petroleum Geology Subdivision
- GC -Geochemistry
- PR -Petroleum Resources

P – Paleontology Subdivision
- MaP -Macropaleontology
- MiP -Micropaleontology
- OP -Ottawa Paleontology

RG – Regional Geology Subdivision
- AI -Arctic Islands
- CTS -Curation and Technical Services
- M -Mainland

PRAS – Petroleum Resource Appraisal Secretariat

LITHOSPHERE AND CANADIAN SHIELD DIVISION – LCS

- BS -Bear Slave
- G -Geochronology
- LG -Lithosphere Geophysics
- NC -Northern Churchill
- PET -Petrology
- PMag -Paleomagnetic
- SG -Superior Grenville
- SP -Special Projects

GEOPHYSICS DIVISION – G

GGD – Gravity & Geodynamics Subdivision
- GD -Geodynamics
- G -Gravity

A – Aeromagnetics Program Subdivison
- GDP -Geophysical Data Processing
- EAO -Experimental Airborne Operations
- OA -Ocean Aeromagnetics
- CS -Contract Surveys

SG – Seismology & Geomagnetism Subdivision
- GI -Geophysical Instrumentation
- S -Seismology
- G -Geomagnetic

TERRAIN SCIENCES DIVISION – TS

QG – Quaternary Geology Subdivision
- WR -Western Region
- NR -Northern Region
- ER -Eastern Region
- G -Geochronology
- MEM -Mineral Exploration Methods

QE – Quaternary Environments Subdivision
- PEc -Paleoecology
- GI -Glaciology

TD – Terrain Dynamics Subdivision
- GPEG -Geomorphic Processes and Engineering Geology
- TG -Terrain Geophysics
- PR -Permafrost Research

SR – Sedimentary Research

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.

Cordilleran and Pacific Margin Division

630016* (3511) Coast Mountains project — Roddick, JA — C — - — CMG — BC

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.

NTS: 92 F,G,H,J,K,L,M,N; 93 D; 102 P; 103 A,G, I W½, J,N,P, W½

700047* (3511) Operation Finlay — Gabrielse, H — C — - — CMG — BC

Obj: To establish the stratigraphy, structure and geological framework to which the mineral deposits may be related as an aid to regional development.

NTS: 94 C,E,F

730035 (3511) Operation St. Elias — Campbell, RB — C — - — CMG — Yk BC

Obj: To determine the stratigraphy, structure, metamorphism, and relationship of intrusive and volcanic rocks, and to assess the mineral potential of the area.

NTS: 114 P,O; 115 A-C,F,G

730037 (3511) Stratigraphy, structure, and metallogeny of Pelly Mountains, and Yukon Plateau, Yukon Territory — Tempelman-Kluit, DJ — C — - — CMG — Yk

Obj: To provide information on the relationship between stratigraphy, structure, sedimentary facies, and mineral deposits in Pelly Mountains and adjacent Yukon Plateau.

NTS: 105 A,F,G,H

730067* (3511) Geothermal Energy Resources in Canada — Souther, JG — C — - — CMG — BC

Obj: To make an inventory of the distribution, nature and geological setting of hot springs in Canada and the chemistry of their waters. To provide a base of geological information and expertise for geothermal results.

NTS: 92 J

750035* (3511) Biostratigraphic study of Mesozoic rocks in the Intermontane and Insular Belts of the Canadian Cordillera — Tipper, HW — C — - — CMG — BC Yk

Obj: To determine the biostratigraphic succession of the Mesozoic strata, particularly Jurassic, and to define a geological history and paleogeography in the evolution of the Mesozoic model.

NTS: 92 H,L; 93 E; 94 D; 103 C,F,G; 104 H-K, M,N; 105; 115

770001* (3511) Study of the Cenozoic Evolution of the Western Cordillera — Souther, JG — C — - — CMG — BC Yk

Obj: 1. To compile and publish a review of existing data on the Cenozoic geology of the Cordillera.
2. To obtain data from selected areas where additional data are required or which illustrate typical relationships.
3. To publish a series of topical papers based on selected field studies leading to a synthesis of the Cenozoic evolution of the Cordillera.

NTS: Pts of 82; 92; 93; 103; 94; 104; 95; 105; 115 A-C; 106; 116; 117; 114 O,P

770016* (3511) Operation Dease — Gabrielse, H — C — - — CMG — BC

Obj: 1. To complete and update the 1:250,000 geological mapping of Cry Lake and Dease Lake map-areas and N½ Spatzizi.
2. To publish reports of field activities and papers on specific aspects of the geology of the region.
3. To complete and publish a final map and memoir on Cry Lake map-area and a final map and paper on Dease Lake map-area.

NTS: 104 G,H,I,J,O

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* in first column indicates project has a field component
\- in first column indicates project is inactive
( ) bracketed number in first column indicates departmental classification
Brackets indicate seasonal employee or other non-staff
Underscoring indicates province of 1985-86 field work

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
770017 (3511)	Stratigraphy, structure and metallogeny of the northern part of the Intermontane Belt (Whitehorse trough) in the Canadian Cordillera	Tempelman-Kluit, DJ	C	-	CMG	Yk
	Obj: To provide data on, and extend our understanding of, the relationships between stratigraphy, structure, sedimentary facies and mineral deposits on the northern Intermontane Belt of central Yukon.					
	NTS: 105 C,E,L; 115 I					
770020 (3511)	Kemano Project	Woodsworth, GJ	C	-	CMG	BC
	Obj: To produce a report and geological map of Whitesail Lake (W½) map-area, on a scale of 1:250,000, with one or more 1:50,000 maps of the most critical areas.					
	NTS: 93 E					
780028 (3511)	Detailed Geological study of selected areas within the Foothills and Rocky Mountain Belts of the Monkman Pass map area – with emphasis on the structure	Thompson, RI	C	-	CMG	BC Alta
	Obj: To map at 1:50,000 scale: map sheets 93 I/1, 2E½, 7E½, 8 and adjacent parts of map areas 93 H/16 and 83 E/13W½ as a data base for the preparation of structural interpretations across the area.					
	NTS: 93 H,I; 83 E					
790007 (3511)	Geology of Nahanni map-area, Yukon and Northwest Territories	Gordey, SP	C	-	CMG	Yk Mack
	Obj: To update geological mapping in Nahanni map-area with emphasis on the distribution of stratigraphic units of the economically important Road River Formation and Earn Group.					
	NTS: 105 I					
790030⁻ (3511)	Geology of Nelson Map-area E/2	Reesor, JE	C	-	CMG	BC
	Obj: 1. To update the geology of Nelson area to current requirements embodying new field work and scattered studies done since the original work in the late 1930's. 2. To provide a 1:250,000 synthesis of stratigraphy, structure, metamorphism and mineral deposit potential.					
	NTS: 82 F, E½					
790041* (3511)	Lardeau map-area, B.C.	Wheeler, JO	C	-	CMG	BC
	Obj: To complete terminal report and related geological, structural and mineral deposits maps and structure sections for publication at 1:250,000 scale.					
	NTS: 82 K,M,N					
800022* (3511)	Stratigraphy and structure of Dawson, Larsen Creek and Nash Creek map areas	Thompson, RI	C	-	CMG	Yk
	Obj: To update the 1:250,000 geologic maps of Dawson, Larsen Creek and Nash Creek as a framework for the stratigraphic and structural analysis of the region and its bearing on the geological evolution of the northern Cordillera.					
	NTS: 116 A,B,C; 106 D					
800028* (3511)	Eastern Margin of the Coast Plutonic Complex	Woodsworth, GJ	C	-	CMG	BC
	Obj: 1. To examine the stratigraphy, structure, and plutonism of the eastern Coast Plutonic Complex and to correlate metamorphic rocks with unmetamorphosed rocks to the east. 2. To produce reports and geologic maps of Bella Coola (93 D), Terrace (103 I), Pemberton (92 J) and Nass River (103 O) map-areas.					
	NTS: 92 J,N; 93 D; 103 H,I,J,P					
800029* (3511)	Geology of the Ashcroft and Hope map-areas	Monger, JWH	C	-	CMG	BC
	Obj: To produce Geological maps of Ashcroft (92 I) and Hope (92 H) map-areas.					
	NTS: 92 I,H					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810028* (3511)	Conodont biostratigraphy and biogeography in the Canadian Cordillera	Orchard, MJ	C	-	CMG	BC Yk
	Obj: To collect and document conodont faunas and associated biotas to provide and refine a biostratigraphic framework for the interpretation of Cordilleran geological evolution.					
810029 (3511)	Micropaleontological analysis of referred samples	Orchard, MJ	C	CMG	-	BC Yk
	Obj: To provide microfossil-based relative ages to Cordilleran geologists for their use in the solution of geological problems.					
820014* (3511)	Stratigraphy and tectonics of the western margin of the southern Omineca Belt	Struik, LC	C	-	CMG	BC
	Obj: To determine the stratigraphy, age and correlation of the rocks in the area underlain by the Snowshoe Formation and therefrom determine the stratigraphic and structural history of the western margin of the southern Omineca Belt. To determine the relationship of the contact of Quesnel Terrane with eastern rocks where they are mainly Snowshoe Formation and the correlation of the mafic meta-igneous(?) rocks at that contact.					
	NTS: 93 A,H,G;					
820015* (3511)	Geology of Sheldon Lake (105 J) and Tay River (105 K) map area, east central Yukon	Gordey, SP	C	-	-	Yk
	Obj: To update geological mapping and understanding of stratigraphy and structure in Sheldon Lake (105 J) and Tay River (105 K) map areas. Available preliminary edition geologic maps lack details useful in mineral exploration. An attempt will be made to extend the stratigraphy defined to the east in Nahanni map area (105 I) into these areas.					
	NTS: 105 J,K,L,P					
820016* (3511)	Geology of Skagway (104 M) map-area, British Columbia	Dodds, CJ	C	-	CMG	BC
	Obj: To update geological mapping in Skagway (formerly Bennett) map-area.					
	NTS: 104 M					
830020* (3511)	Penticton map area 82 E	Tempelman-Kluit, DJ	C	-	CMG	BC
	Obj: To study and map the geology of Penticton map-area and to produce a comprehensive report of the results, with progress reports and oral summaries as appropriate.					
	NTS: 82 E					
830021 (3511)	The Cordilleran Orogen: Canadian Sector	Gabrielse, H	C	-	CMG	-
	Obj: To produce a volume on the geology of the Canadian Cordillera dealing with its physiography, stratigraphy, structure, evolution, geophysical signature, mineral deposits and geology related energy resources. The volume will be one of 10 volumes on the geology of Canada as part of the Decade of North American Geology (DNAG) project sponsored by the Geological Society of America. It will also serve as part of Geology and Economic Minerals of Canada, 6th edition.					
840046* (3511)	Geology of the Iskut River – Telegraph Creek, British Columbia	Anderson, RG	C	-	CMG	BC
	Obj: To update geological mapping and increase understanding of volcanic and sedimentary stratigraphy, granite plutonism and structure and to provide details useful in mineral exploration. An attempt will be made to extend stratigraphy defined to the east and south of the region into the map areas.					
	NTS: 104 A,B,C,F,G					
860022* (3511)	Geoarchitecture of the Fraser River Delta Area – Phase 1	Luthernauer, JL	C	MG	-	BC
	Obj: Define the framework geology, stratigraphy, Neogene history, paleo-geography and susceptibility of earthquake damage of the Fraser River Delta area.					
	NTS: 92 G					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
860028* (3511)	Global Geoscience Transects Project of International Lithosphere Program	Monger, JWH	C	-	-	-

Obj: To coordinate production of 50-200 continent to ocean transects, or cross-sections drawn to the Moho, in different parts of world, scales 1:500,000 or $1:10^6$.

500029 (3522) (3512) (3543)	Identification and biostratigraphic interpretation of referred fossils	Norford, BS	ISPG C AGC	P MG EPG	-	NS Nfld NB Yk Mack BC Alta Pacific Offshore

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.

NTS: 95 B,C; 12 D; 103 G; 82 E,K; 83 C; 93 I

690075* (3512)	Foraminiferal Biostratigraphy of the Pacific Margin	Cameron, BEB	C	-	PMG	BC

Obj: 1. To prepare publications on the taxonomy and biostratigraphic significance of Mesozoic and Cenozoic Foraminifera of the onshore and offshore rocks of the Pacific Margin.
2. To prepare publications on the geology of specifically significant areas of the Pacific Margin.

NTS: 92 B; 103 F,G

740062 (3512)	Fraser Delta sedimentation	Luternauer, JL	C	-	PMG	BC

Obj: To provide a geological/sedimentological knowledge base about the active delta of the Fraser River for general land and waterfront planning and environmental management.

NTS: 92 G

750108* (3512)	Marine surficial geology and sedimentation, British Columbia	Bornhold, BD	C	-	PMG	BC

Obj: In order to provide the sedimentological framework and geological perspective for environmental concerns and landmass description:
1. map, describe and explain in a systematic manner the physiography, surficial deposits, processes and history of the Pacific continental shelf, slope, deep sea, straits, and fiords of British Columbia;
2. determine the composition, distribution, transport mechanisms and flux of suspended particulate matter in the marine waters off the British Columbia coast.

NTS: 92 K; 103 A,B,F,G,J,K

770006* (3512)	The Canadian Pacific Continental Margin	Yorath, CJ	C	-	PMG	BC

Obj: To describe the geological architecture and tectonic history of the Canadian Pacific Continental Margin including the Insular Belt and adjacent offshore. To contribute to the realization of the economic potential of the region.

NTS: 92 C,D,E,L; 102 H,I,O,P; 103 B,C,F,K

790006* (3512)	Marine Delta Sedimentation, British Columbia	Luternauer, JL	C	-	PMG	BC

Obj: To provide geological/sedimentological data base for delta systems in coastal British Columbia for general land and waterfront planning and environmental management.

NTS: 92 B,C,G; 103 G,H,I,J

800010 (3512)	Marine magnetic surveys	Currie, RG	C	-	MG	Pacific Offshore

Obj: To measure and interpret the earth's magnetic field over a poorly surveyed portion of the northeast Pacific to facilitate a reconstruction of the tectonic history of the Canadian margin in the period 10-50 Ma.

820017* (3512)	The Geology of the Strait of Georgia	Hamilton, TS	C	-	PMG	BC

Obj: To examine and describe the geology of the Georgia Depression including: structures, stratigraphy and sedimentology. To determine the relative importance of glaciomarine and tectonic processes in shaping the constituent basins particularly with respect to the late Cenozoic. To determine the tectonic sequence of events in the Strait of Georgia as they relate to the evolution of the western Canadian Continental margin.

NTS: 92 B,F,G,K

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
820018 (3512)	Volcanic Rocks of the Insular Belt and Adjacent Deep Ocean	Hamilton, TS	C	-	PMG	BC

Obj: To examine the volcanic sequences of the western Canadian Continental Margin and describe their: stratigraphy, physical forms and depositional/extrusive modes, age relationships with adjacent formations, petrography, mineralogy, geochemistry, petrology and genesis. To interpret the geologic significance and economic potential of each of the various volcanic units and their roles in the tectonic and geodynamic evolution of the region.

NTS: 103 B,C,F,G,I,K; 92 B,C,E,F,K,L; 102 I

840033* (3512)	Potential geologic hazards to development – seafloor and shallow subbottom of Queen Charlotte Sound, B.C.	Luternauer, JL	C	-	PMG	Pacific Offshore

Obj: Identify, describe and map sedimentary, morphologic and structural evidence of potential hazards on the seafloor and shallow subbottom (down to ~500 m below the seabed) which could affect the course of hydrocarbon exploration and production on the Queen Charlotte Sound, continental shelf.

NTS: 102 I,O,P

Institute of Sedimentary and Petroleum Geology Division

650003* (3521)	Geology of Cornwallis and adjacent smaller islands	Thorsteinsson, R	ISPG	RG	AI	Frank

Obj: 1. To improve the understanding of the age, structure, sequence, relationship, thickness of bedrock formations with a view of helping.
2. Assess the size, grade, mode of occurrence, origin and potentialities of any fuel or mineral deposit that may occur.
3. Improve the knowledge and understanding of the morphology of Silurian and Devonian ostracoderms of Cornwallis Island, thus aiding in the establishment of a more useful stratigraphic framework for the region and thereby contributing to (1).

NTS: 58 F,G; 68 E,H; 59 B

680064* (3521)	Stratigraphy and Paleontology of Upper Paleozoic rocks on parts of Ellesmere, Melville and Axel Heiberg Islands	Nassichuk, WW	ISPG	P	MaP	Frank

Obj: 1. To improve the understanding of stratigraphy and facies relationships of the marginal and axial parts of the Sverdrup Basin;
2. to establish a biostratigraphic framework for Carboniferous and Permian rocks; and
3. to evaluate the economic potential of the area.

NTS: 49 B,C,F,G,H; 340 A,B,C,D; 560 A; 78 G; 79 B; 89 A; 88 H

700027 (3521)	Comparative studies of structural prototypes and/or sedimentary environments	Cook, DG	ISPG	RG	-	-

Obj: The objective is to familiarize the participants with the types of observations that may identify specific conceptual models of depositional environments to enable the participants to both recognize such environments and to critically evaluate the models proposed.

710033 (3521)	Northern Basin Analysis Program: Redstone and Great Slave Lake map-areas	Williams, GK	ISPG	PG	PR	Mack

Obj: 1. To maintain an up-to-date inventory of subsurface data, mainly in the form of maps, cross-sections and lithologic logs within the Great Slave Lake and Redstone Map-areas.
2. To provide an improved understanding of the geological history of the northern Canadian mainland.
3. To compile, in a form suitable for publication (primarily Open File format) all data and ideas so far accumulated.

NTS: 85; 95

720098 (3521)	Lower Paleozoic stratigraphy, southern Rocky Mountains	Aitken, JD	ISPG	RG	M	BC Alta

Obj: To determine the nature, thickness, distribution and origin of Lower Paleozoic formations of the region.

NTS: 82; 83

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
730051 (3521)	Completion of reconnaissance geology, northern Ellesmere Island	Trettin, HP	ISPG	RG	AI	Frank

Obj: To prepare terminal reports accompanied by maps of the region at the scale of 1:250,000 or more detailed. To compile the Eureka sound sheet (NTS 340, 560, 120) of the 1:1 million geological atlas program.

NTS: 340 A-F,H; 120 B,C,F,G; 49 H; 560 D,E,F,G,H

730057 (3521)	Helikian and Hadrynian stratigraphy Eastern Cordillera and Interior Platform	Aitken, JD	ISPG	RG	M	Mack Yk

Obj: Firstly, to establish a coherent picture of Helikian and Hadrynian events in western and northwestern Canada, and secondly, to emphasize study of those events that may have created exploitable mineral and/or hydrocarbon deposits.

NTS: 95 L,M; 106 A,B,C,F,G,H; 105 P

750083 (3521)	Mesozoic stratigraphy and Basin analysis of Sverdrup Basin, Arctic Archipelago	Embry, AF	ISPG	RG	AI	Frank

Obj:
1. To determine regional stratigraphic relationships within the Mesozoic strata.
2. To determine environments of deposition of the strata.
3. To determine the geologic history of the Sverdrup Basin during the Mesozoic.
4. To assess the economic potential of the Mesozoic strata.

NTS: 29; 39; 49 E-H; 59 H; 69; 79; 87; 99; 120; 340 B,C; 560 A

760062* (3521)	Geology of bedded phosphates deposits in Canada	Christie, RL	ISPG	RG	AI	BC Alta

Obj: To identify Canadian phosphate resources and to develop an understanding of the regional geology relationships: patterns and occurrences, associations, facies, paleogeography, etc.

NTS: 82

780039* (3521)	Jurassic and Cretaceous Minnes Group, Alberta and British Columbia	Stott, DF	ISPG	RG	M	Alta BC

Obj: To describe the stratigraphic succession and petrography to document fossil flora and fauna; to provide data on correlation of these strata, their lateral variation, their potentialities as sources of oil and gas, and their suitability as reservoirs for those fuels.

NTS: 83 E,L; 93 I,O,P; 94 B,G,J

790031 (3521)	Geology of the Beaufort Mackenzie Basin	Dixon, J	ISPG	RG	M	Mack Frank Yk

Obj:
1. To integrate all available geological, biostratigraphic, geophysical, and geochemical data for the Tertiary in the Beaufort-Mackenzie Basin, in order to develop a stratigraphic-sedimentological framework and an appreciation of the petroleum potential.
2. Undertake detailed stratigraphic, sedimentological and petrographic analysis of selected zones within the Cretaceous and Tertiary in order to understand reservoir character and distribution.
3. To do detailed correlations of Lower Cretaceous-Upper Jurassic rocks in the subsurface, set up a stratigraphic framework and do sedimentological interpretations.

NTS: 97 F,H; 107 B,H; 117;

790038* (3521)	Devonian Rocks in east-Central B.C. and west-central Alberta	Geldsetzer, HHJ	ISPG	RG	M	BC Alta

Obj: To establish and apply conceptual models of deposition of the original sediments in terms of environment and paleogeography, their subsequent diagenesis and correlation.

NTS: 83 C; 84 E,L; 93 H,I;

800031 (3521)	Geological reconnaissance, southeastern margin of Franklinian Geosyncline	Christie, RL	ISPG	RG	AI	Frank

Obj: To improve understanding of the sedimentation and paleogeography of the Franklinian Geosyncline, particularly late Precambrian to lower Paleozoic stratigraphy; to provide better understanding of late Precambrian to Silurian events along the platform and platform-miogeosyncline junction along the edge of the Franklinian Geosyncline.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810010 (3521)	Detailed geological study of selected areas within the Foothills and Rocky Mountain Belts between Peace River and Smoky River with emphasis on structure	McMechan, ME	ISPG	RG	M	BC Alta

Obj: To map at 1:50,000 scale:
1. Northern area-map sheets 93 0/11, 12E, 14, and the parts of 93 0/13 E and 13 W east of Williston Lake.
2. Southern area-map sheets 83 L (S.W. corner), 83 E (N.W. corner) and in conjunction with R.I. Thompson parts of 93 I (SE corner) and 93 H (N.E. corner). As a data base for the preparation of structural interpretations across both areas, and the delineation of coal bearing sequences in the southern area.

NTS: 93 H(NE), I(SE), O/11-14; 83 E(NW), L(SW)

810011* (3521)	Carboniferous stratigraphy and sedimentology of east central British Columbia and west central Alberta	Richards, BC	ISPG	RG	M	BC Alta

Obj: 1. Revision of the stratigraphic nomenclature of subsurface and surface Carboniferous stratigraphic units.
2. To solve subsurface and surface stratigraphic problems.
3. To determine the characteristics, distributions, and depositional environments of lithofacies in the surface and outcrop belt.
4. To summarize region's Carboniferous depositional and tectonic histories.
5. Evaluation of hydrocarbon potential.

NTS: 83 E,F,G,L,K,J,M,N,O; 93 I,J,O,P; 94 A,B,G,H,I,J,K,N,O,P; 82 O,J

810012 (3521)	Structural and stratigraphic studies of Northeast British Columbia	Taylor, GC	ISPG	PRAS	-	BC

Obj: To provide a synthesis of the geology of the northern Rocky Mountains in terms of the tectonic response of the stratigraphic record.

NTS: 93 I,O,P; 94 F,G,J,N,O

810013 (3521)	Syntheses of Mesozoic and Cenozoic rocks of Eastern Cordillera and Plains	Stott, DF	ISPG	RG	M	Man Sask Mack Alta BC Yk

Obj: To provide regional syntheses, including maps and correlations concerning sedimentary sequences, particularly of Mesozoic clastic sequences in Western Canada.

810017 (3521)	Middle and Upper Devonian rocks in the subsurface of west-central Alberta	Meijer-Drees, NC	ISPG	RG	M	Alta

Obj: To establish the depositional environment and paleogeography of the original sediments and their subsequent diagenesis for the purpose of correlating the depositional framework (sedimentological history) with that of the Middle and Upper Devonian sediments in the Rocky Mountains to the west investigated under Project 790038.

NTS: 83 B,C,E-G,J-N

820033 (3521)	Stratigraphy and Sedimentology of the Mannville Group, Southern Alberta	Banerjee, I	ISPG	PG	PR	Alta Sask BC

Obj: 1. Regional correlation of the Lower Cretaceous strata in southern Alberta.
2. Construction of a facies model for the Mannville Group from stratigraphic and sedimentological data.
3. Environmental reconstruction of the Mannville Group and delineation of the regional paleogeography of the period.

NTS: Pts 72; 73; 82; 83; 93

840047 (3521)	Compilation of the geology of the Innuitian Region	Trettin, HP	ISPG	RG	AI	Frank

Obj: To produce a comprehensive report on the geology of the Innuitian region as part of DNAG (Decade of North American Geology) series.

NTS: 89 A; 120 C; 340 C,D

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840077* (3521)	Structural geology and tectonic and stratigraphic analyses, northern Mainland and adjacent continental shelf	Lane, LS	ISPG	RG	AI	Mack

Obj: Our greatest deficiency in understanding the geology and hydrocarbon potential of the Beaufort Sea – Mackenzie Delta lies in extremely limited structural and tectonic syntheses. This project will address that deficiency by:
1. Determining the geometry, sequential development, temporal and genetic relationships of normal faults and diapiric structures.
2. Establishing the basic structural geometry and seismostratigraphy of the lower part of the supracrustal wedge and subjacent lithosphere from the northern mainland across the continental shelf to the southern edge of Canada Basin.

NTS: 106; 116; 107; 117

840078 (3521)	Structure and stratigraphy of the Paleozoic-Mesozoic basins of Melville and adjacent Islands	Christie, RL	ISPG	RG	AI	Frank

Obj: 1. To obtain an improved understanding of the sedimentary and tectonic element of the Franklinian and Sverdrup sedimentary basins in the Melville-Bathurst Islands region, to better understand the source and migration mechanisms, and entrapment, of hydrocarbons.
2. To derive improved models of Franklinian and Sverdrup basin evolution in the context of circum-Arctic tectonics.

NTS: 78; 79; 88; 89; 98; 99

840079* (3521)	Stratigraphy and structure of Arctic Continental Shelf	Embry, AF	ISPG	RG	AI	Frank

Obj: - To determine the crustal structure of the Continental Shelf.
- To determine the structural and stratigraphic architecture of the Phanerozoic succesion of the Shelf.
- To evaluate the petroleum potential of the shelf.

NTS: 79 G,H; 89 E,F,G,H; 99 E,F,G,H; 560 B,C,D,E,F,G,H; 340 G,H

840081 (3521)	Upper Paleozoic stratigraphy, Melville Island	Nassichuk, WW	ISPG	-	-	Frank

Obj: To compare upper Paleozoic subsurface stratigraphy on Melville Island with better known surface stratigraphic elsewhere in the Sverdrup Basin, including northern Ellesmere Island and Axel Heiberg Island, and to establish an upper Paleozoic depositional, stratigraphic framework for the Sverdrup Basin, including a review of diagenesis and reef development critical to an assessment for petroleum potential.

NTS: 78 B,G; 88 H

840082* (3521)	Geology of the Arctic Islands	Okulitch, AV	ISPG	RG	AI	Frank

Obj: Compilation of bedrock geology maps, cross-sections, geotectonic correlation charts and well data at 1:1,000,000 scale to provide regional and evaluations of geologic knowledge of the Arctic Islands in concise form for resource assessment. These compilations will also be used to produce regional maps at 1:2,000,000 and 1:5,000,000 scales for planning purposes and large scale tectonic syntheses and for publication in the DNAG Innuitian Region volume.

NTS: 59 A,B; 57 F; 67 E

850031* (3521)	Lower Paleozoic stratigraphy and facies relationships in Wernecke, Ogilvie and Mackenzie Mountains	Morrow, DW	ISPG	RG	M	Yk

Obj: To determine the spatial relationships of major lower Paleozoic shelf and basinal facies strata exposed in the Wernecke and Ogilvie Mountains; to outline both their sedimentologic-tectonic setting and any post-depositional diagenetic changes that have affected them; to highlight regions that contain abrupt interfaces such as shelf-to-basin transitions or transitions between shelf margin shoal complexes and interior platformal lagoonal deposits that commonly influence diagenetic patterns and the emplacement of hydrocarbons and mineral deposits. To understand the evolution of the basin and the emplacement of hydrocarbons in this part of the Western Arctic.

NTS: 106 D; 116 A,H; 95

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850032 (3521)	Stratigraphic and structural analysis of Late Paleozoic strata in the northwestern District of Mackenzie and northern Yukon	Cecile, MP	ISPG	RG	M	Yk

Obj: Late Paleozoic rocks in the northern Canadian Cordillera were deposited in a large petroleum bearing fore deep basin, the north part of which was deformed during Ellesmerian orogenesis and out by numerous strike-slip and extension faults, this project combines mapping, stratigraphic, paleontological and organic geochemical studies in the western part of the basin to provide information on the character and structural history of the basin.

NTS: 105; 106; 107; 116; 117

850036 (3521)	Mesozoic Basin Analysis of Sverdrup Basin, Arctic Archipelago	Embry, AF	ISPG	RG	AI	Frank

Obj:
- To determine regional stratigraphic relationships within the Mesozoic strata.
- To determine environments of deposition of the strata.
- To determine the Mesozoic geologic history of the Sverdrup Basin.
- To evaluate the petroleum potential of the basin.
- To provide a logistics base for related university and other EMR research on Sverdrup Basin.

NTS: 49 B,C,D,E,F,G; 59 B,C,D,E,F,G; 69; 79; 9 A,B,C,D; 340 B,C,D; 560 A,B,D

850037* (3521)	Stratigraphy and sedimentology of Jurassic-Cretaceous strata northern Cordillera	Dixon, J	ISPG	RG	M	Yk

Obj: To evaluate the present stratigraphic scheme and to undertake detailed facies analysis of Jurassic-Cretaceous strata. To establish an understanding of the on-shore Jurassic-Cretaceous geology and to project that into the offshore Beaufort Sea.

NTS: 116; 117

850038 (3521)	Stratigraphy and structure of northern Franklin Mountains and adjacent plains	Cook, DG	ISPG	RG	M	Mack

Obj: To carry out stratigraphic and structural studies of the Northern Interior Plains including Franklin Mountains and Coleville Hills in order to gain a better understanding of the Proterozoic framework underlying the Phanerozoic basins, Phanerozoic depositional sequences and relationships to tectonic controls, and subsequent deformational geometry and mechanism. To evaluate the potential for source rocks and trapping conditions for hydrocarbons.

NTS: 86; 96; 97; 106

850039* (3521)	Investigation of stratigraphy and tectonic development of lower Paleozoic Platform-Miogeocline margin zone	Mayr, U	ISPG	RG	AI	Frank

Obj:
- To describe and understand significant facies and thickness changes in terrigenous and carbonate formations in the lower Paleozoic platform Miogeocline margin zone.
- To describe and understand deformation related to intersecting Silurian and Devonian fold belts on Grinnell Peninsula.
- To describe and understand Tertiary transverse faults in the Mackinson Inlet region and to interpret their relationship, if any, to seafloor spreading in Baffin Bay.

NTS: 59 A,B; 69 A

850040 (3521)	Structural, Tectonic and Stratigraphic analysis of the Arctic Islands	Stephenson, RA	ISPG	RG	AI	Frank

Obj: To determine intermediate and deep structure of the arctic archipelago through application of reflection and refraction seismic techniques.

NTS: 49; 59; 69; 79; 89; 340; 560

850048* (3521)	Geological Mapping in the Southern Canadian Rocky Mountains	McMechan, M	ISPG	RG	M	BC Alta

Obj: To publish 1:250,000 scale maps with cross-sections for the Southern Canadian Rocky Mountains.

NTS: 82 J; 83 C

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
860004 (3521)	Middle and Upper Devonian stratigraphy in the subsurface of west central Alberta and northeastern British Columbia	Meijer Drees, NC	ISPG	RG	M	Alta BC

Obj: 1. Establish stratigraphic framework.
2. Correlate subsurface and surface geology.
3. Better understanding of depositional history, sedimentology and diagenesis of the carbonates.
4. Evaluate the potential for hydrocarbons and mineral deposits.

NTS: 83 M; 93 P; 94 A

860006 (3521)	Structure and tectonics of Prince Patrick and adjacent islands	Harrison, JC	ISPG	RG	AI	Frank

Obj: 1. Production of 1:250,000 scale geological maps.
2. Structural and Tectonic analysis.
3. Assessment of hydrocarbon and mineral resource potential.

NTS: 89; 99

860007* (3521)	Stratigraphic – Structural analysis of Proterozoic to Devonian rocks, northern Ellesmere and Axel Heiberg Islands	Trettin, HP	ISPG	RG	AI	Frank

Obj: To improve our knowledge of geological history and economic mineral potential of the region.

NTS: 120 C,E,F,G; 340 B,C,D,E,F,G,H; 560 A,B,D

860010* (3521)	Baumann Fiord (49C), Vendom Fiord (49D) and Strathcona Fiord (49E)	Thorsteinsson, R	ISPG	RG	AI	Frank

Obj: To produce 1:250,000 geological maps and geological report on the above map areas; and to conduct a detailed stratigraphic and sedimentological study of the Upper Ordovician to Lower Devonian transition from shelf type carbonates to deep-water basinal clastic sediments.

NTS: 49 C,D,E

500029 (3522) (3512) (3543)	Identification and biostratigraphic interpretation of referred fossils	Norford, BS	ISPG C AGC	P MG EPG	-	NS Nfld NB Yk Mack BC Alta Pacific Offshore

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.

NTS: 95 B,C; 12 D; 103 G; 82 E,K; 83 C; 93 I

610019* (3522)	Ordovician and Silurian Biostratigraphy of British Columbia, Alberta, Manitoba Yukon, Mackenzie & Franklin	Norford, BS	ISPG	P	MaP	Frank Mack Yk BC Alta

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.

NTS: 36; 37; 47-49; 54; 57-59; 67-69; 82 J; 83; 85; 94; 95; 96; 97; 104 I,P; 105 I; 106; 116, 117; 120; 340

650024* (3522)	Cambrian biostratigraphy of the Canadian Cordillera	Fritz, WH	ISPG	P	OP	Mack Yk BC

Obj: To describe and assess biochronological significance of Cambrian trilobites in order to refine methods for dating Cambrian strata.

NTS: 106 B; 94 C-F; 116 B,C; 82 G,K,N

670576* (3522)	Canadian Triassic Ammonoidea and Bivalvia	Tozer, ET	ISPG	P	OP	Yk BC Alta Frank

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

NTS: 560; 59 G; 49 F

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
680093 (3522)	Upper Silurian and Devonian biostratigraphy western and northern Canada	Pedder, AEH	ISPG	P	MaP	Sask Man Alta BC Yk Frank Mack

Obj: Elucidation of the sequences of Upper Silurian and Devonian faunas, especially corals, of western and northern Canada so that correlations of strata of these ages can be achieved. Description and illustration of fossils that have, or are expected to have, biostratigraphic significance. Paleoecological and biogeographic analyses of species and other taxonomic categories that have different time ranges in different geographic realms and ecologies.

NTS: 88 A,B,D; 49 A,B; 59 A; 82 B; 84 J; 85 C

680101 (3522)	Conodont biostratigraphy of Siluro-Devonian rocks of the Arctic Islands	Uyeno, TT	ISPG	P	MiP	Frank Kee

Obj: To set up conodont biostratigraphic framework for the Siluro-Devonian rocks of the Arctic Islands; to integrate this framework with zonations based on other fossil groups, such as graptolites, palynomorphs and brachiopods; to fix time lines in areas where strata undergo complex facies changes over relatively short distances. To determine the thermal maturity of the enclosing rocks with the use of conodonts.

NTS: 49; 57; 58; 59; 68; 69; 78; 89

700034⁻ (3522)	Devonian biostratigraphy of the northern Yukon Territory and adjacent District of Mackenzie and Alberta	Norris, AW	ISPG	P	MaP	Yk Mack Alta

Obj:
1. Delineation of facies distribution of Devonian rocks in northwestern Canada.
2. Identifying and determining ranges of fossils for refining zonation and correlation with other areas.
3. Determining distribution of faunal provinces and paleogeography of Devonian seas.
4. Obtaining more information on the Upper Silurian/Lower Devonian, Lower/Middle and Middle/Upper Devonian boundaries in Canada.

NTS: 116 (E 3/4); 117 (S½); 106 (W½); 74 M; 84 P; 85 A,B,C,F,G

710022* (3522)	Carboniferous and Permian biostratigraphy and coral faunas, western and northern Canada	Bamber, EW	ISPG	P	MaP	Frank Mack Yk BC Alta

Obj: Establishment of faunal sequence within stratigraphic framework previously described for Upper Paleozoic of Alberta, British Columbia, Yukon, and District of Mackenzie, for use as a biostratigraphic reference succession in surface and subsurface exploration of these areas. Description of coral and other faunas from these areas to document the above succession and facilitate its use by other workers in industry and in other government organizations.

NTS: 49; 59; 69; 78; 79; 82 G,H,J,M,N,O; 83 B,C,D,E,F,G; 92 I; 93 I,O; 94-95; 103-106; 115-117; 340; 560

710091* (3522)	Palynological studies of Mesozoic and Tertiary coal measures in western and northern Canada	Sweet, AR	ISPG	P	MiP	BC Alta Yk

Obj: To establish palyno-stratigraphic zonations of coal measures and contiguous strata as an aid to petrological, sedimentological and structural interpretations of coal basins.
Where applicable to correlate coal seams by means of spore and pollen histograms.
To describe and classify recovered pollen and spores as necessary to accomplish the above objectives.

NTS: 82 B,C,G,H,I,J; 83 C,E,F; 106 E; 117 A; 104 H

720044⁻ (3522)	Reconnaissance of Mesozoic Foraminifera of Arctic Islands	Wall, JH	ISPG	P	MiP	Frank

Obj: To assess the age and geographic composition, paleoecology and biochronological significance of Mesozoic Foraminifera in the Arctic Islands in order to better define Mesozoic subsurface and outcrop stratigraphy.

NTS: 49; 59 E,G,H; 69; 79; 88; 89; 98; 340 B

720072 (3522)	Paleozoic ostracodes of Canada	Copeland, MJ	ISPG	P	OP	Ont Que NB NS Nfld

Obj: By means of microfaunas and non-trilobite Arthropoda to determine the zonation and correlation of strata among the Paleozoic sedimentary basins of Canada and thus aid in assessing the economic potential of these rocks.

NTS: 11 E,F,K; 12 B,E,L; 21 A,H,P; 22 A,B,H; 30 L,M; 40 I,P

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
740042 (3522)	GSC Workshop travel – Micropaleontology Section	McNeil, DH	ISPG	P	MiP	-

Obj: To exchange information on current projects and techniques relating to palynology, foraminifers and other microfossils, during workshops of GSC's specialists; to plan programs in these fields and generally improve communication between the specialists in different Divisions.

750036 (3522)	Silurian and Devonian spores of Canada	McGregor, DC	ISPG	P	OP	-

Obj: To refine palynological methods of dating and correlating Silurian and Devonian rocks of Canada, by
1. identifying and describing Silurian and Devonian spores;
2. determining their value in terms of regional and world wide biostratigraphy; and
3. establishing stratigraphic reference sections and zonations for spores in Silurian and Devonian sedimentary basins in Canada.

760042* (3522)	Jurassic biostratigraphy and paleontology of selected areas of western and Arctic Canada	Poulton, TP	ISPG	P	MaP	BC Alta Yk Frank Mack

Obj: To provide detailed biostratigraphic and lithostratigraphic data on Jurassic rocks of selected parts of British Columbia, Alberta, Yukon Territory and Northwest Territories, by field work and study of submitted fossils. To describe taxonomically the most important faunal elements.

NTS: 82 G,J,N,O; 83 C,E; 92 H,L,N,O; 93 O; 94 B; 103; 104 I,J; 105 D; 106 D,M; 107 M; 115; 116 A,B,C,N,O,P; 49; 59; 69; 79; 89 A; 340 D; 560

770048* (3522)	Brachiopods of the lower Upper Devonian Waterways Formation of northeastern Alberta	Norris, AW	ISPG	P	Map	Alta

Obj: To describe and illustrate the rich brachiopod fauna of early Frasnian (early Late Devonian) age that occurs in the Firebag, Calumet, Christina, Moberly and Mildred Members of the Waterways Formation outcropping along the Clearwater and Athabasca Rivers of northeastern Alberta (see GSC Memoir 313 by Norris). To describe brachiopod faunas of comparable age from elsewhere in Canada.

NTS: 74 D,E; 83 B,F; 84 P

770077* (3522)	Paleozoic conodonts of eastern Canada	Nowlan, GS	ISPG	P	OP	Que Ont Man Kee NB NS Nfld

Obj: To describe and assess biochronological significance of early Paleozoic conodonts in order to refine methods for dating the rocks in which they are found. To assess the level of thermal alteration and paleoecological significance of the faunas.

NTS: 12 A,E,L; 11 E,F,K; 22 A,B,C,G,H; 21 A,G,H,I,L,O,P; 41 G,H; 31 C,F,G

780029⁻ (3522)	Mesozoic and Cenozoic Foraminifera of the Arctic Western mainland of Canada	McNeil, DH	ISPG	P	MiP	Yk Mack

Obj: To establish the biostratigraphic distribution and significance of Mesozoic and Cenozoic foraminifers in the Arctic western mainland of Canada, with particular emphasis on the Mackenzie Delta-Beaufort Sea area.

NTS: 95; 96; 97; 105; 106; 107; 115; 116; 117

810038 (3522)	Palynology of Carboniferous, Permian and Triassic Rocks of northern and western Canada	Utting, J	ISPG	P	MiP	Frank Que NS PEI Nfld NB Mack Yk BC Alta Sask

Obj: 1. To establish a palynological zonation for Carboniferous, Permian and Triassic rocks of northern and western Canada and to apply this zonation to local, regional and worldwide biostratigraphic correlations.
2. Taxonomic description of palynological taxa to provide bench marks substantiating the zonation.
3. Completion of related studies on Carboniferous rocks in eastern Canada previously initiated by J. Utting before joining the Survey.

NTS: 560 A,D; 340 A,B,C,D; 59 E,H; 49 E,F,G,H; 78 G; 79 B; 88 H; 89 A

820035 (3522)	Upper Mesozoic and Cenozoic Palynology of western and northern Canada	McIntyre, DJ	ISPG	P	MiP	Yk Mack Frank Alta

Obj: To establish the biostratigraphic succession, areal distribution, ecologic significance and taxonomy of Upper Mesozoic and Cenozoic palynomorphs of western and northern Canada, with particular emphasis on Mackenzie Delta-Beaufort Sea area.

NTS: 82 O,J; 97 C; 107 B,D; 117 A; 106 M; 116 F,H,I,P; 95; 96; 105; 115; 49; 59; 69; 79; 89; 98; 99; 340; 560

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830042 (3522)	Carboniferous and Permian biostratigraphy and conodont faunas, western and northern Canada	Bamber, EW	ISPG	P	MiP	Alta Sask Frank

Obj: To establish the biostratigraphic succession, areal distribution, paleoecological significance, and taxonomy of upper Paleozoic conodonts, scolecodonts, and other selected microfossils of western and northern Canada, with particular emphasis on the Western Canada Sedimentary Basin and the Sverdrup Basin; to utilize microfossils as indicators of hydrocarbon maturation levels in host rocks.

NTS: 82 G,H,J,O; 78 G; 79 B; 62 K,L

840075 (3522)	Thermal Maturity Studies of the Paleozoic Sedimentary Rocks, Arctic Islands	Norford, BS	ISPG	P	MiP	Mack Frank

Obj: Determination of the thermal history of the Paleozoic rocks of the Paleozoic platform and Sverdrup Basin, Arctic Islands, using microfossil colour changes and vitrinite reflectance of the sediments. Data resulting from these studies will indicate hydrocarbon maturation and mineralized zones.

NTS: 48; 49; 50; 58; 59; 60; 67-69; 77; 78; 79; 87-89

840076* (3522)	Paleozoic biostratigraphy and biofacies studies	Norford, BS	ISPG	P	MiP	Frank Yk

Obj: Establishment and refinement of biostratigraphic zonations and correlation, and outlining of major biofacies in rocks of Ordovician to Permian age in the Arctic Islands, by combined studies of microfaunas, palynomorphs, and macrofaunas; in support of ongoing exploration and regional geology program.

NTS: 48; 49 F; 50; 58; 59; 60; 67-69; 77-79; 87-89; 106; 116

850026* (3522)	Mesozoic and Tertiary biostratigraphy and paleoecology	Wall, JH	ISPG	P	AI	Frank

Obj: To assess the assemblage composition, biochronological significance and paleoecology of Mesozoic and Tertiary microfaunas (chiefly foraminifera), microfloras, ammonites and bivalves of the Sverdrup Basin in order to better define subsurface and outcrop stratigraphy.

NTS: 49; 59; 69; 79; 88; 89; 98; 340; 560

850027* (3522)	Macropaleontology, micropaleontology and palynology of the Mesozoic and Lower Tertiary of the northern Yukon and western District of Mackenzie	McNeil, DH	ISPG	P	MiP	Yk Mack

Obj: To apply and expand existing biostratigraphy zonations in macropaleontology (Ammonoids and Bivalves) and micropaleontology (Foraminifera) and palynology; relationships of these zonations to onshore Mackenzie Delta and Interior Plains sequences as part of an integrated regional study.

NTS: 95; 96; 97; 105; 106; 107; 116; 117

850028* (3522)	Micropaleontology, palynology and macropaleontology of the surface and subsurface Paleozoic of the northern Yukon and western District of Mackenzie	Bamber, EW	ISPG	P	MaP	Yk Mack

Obj: To establish and extend biostratigraphic zonations, with supporting taxonomic studies, for the following fossil groups: palynomorphs (Carboniferous/Permian), conodonts (Upper Paleozoic), ammonoids (Carboniferous/Permian), corals (Devonian/Carboniferous), brachiopods (Devonian to Permian) and Lower Paleozoic macrofauna. Interpretation of biofacies to determine distribution of basin and shelf environments.

NTS: 97; 106 B,E,F,L; 107; 116 C,H; 117; 85 D; 95 A

850029 (3522)	Cretaceous-Tertiary biostratigraphy and paleoecology, palynomorphs and microfossils	McNeil, DH	ISPG	P	MiP	Yk Mack

Obj: Establishment, refinement, and application of microfaunal and microfloral zonations in onshore and offshore subsurface successions of Late Cretaceous and Tertiary age in the Mackenzie Delta and Beaufort Sea in support of J. Dixon project: Stratigraphy and Sedimentology of Jurassic-Cretaceous Strata, Northern Cordillera.

NTS: 106; 107; 116; 117

850030* (3522)	Macropaleontology; micropaleontology and palynology of Devonian, Cretaceous and Tertiary rocks of the Interior Plains	Sweet, AR	ISPG	P	MiP	Yk Mack

Obj: To establish and refine biostratigraphic zonations utilizing Cretaceous and Tertiary palynomorphs, Cretaceous ammonoids and bivalves, and Devonian brachiopods, corals and conodonts and apply these to resolving stratigraphic problems arising from energy inventory and regional geological studies within the Interior Plains.

NTS: 96; 85

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850046 (3522)	Thermal Maturity studies of the Paleozoic of the northern mainland and Tertiary of the Beaufort Sea/ Mackenzie Delta	Higgins, AC	ISPG	P	MiP	Yk Mack

Obj: Determination of organic maturity of rocks of Paleozoic and Tertiary age by the use of conodonts, palynology, scolecodonts, graptolites and sediments to determine burial and erosional history.

NTS: 116; 106; 107; 117; 97; 96

850063 (3522)	Service as Foreign Secretary, Canadian Geoscience Council and on other international bodies	Norford, BS	ISPG	P	MaP	-

Obj: To facilitate and to coordinate cooperation in the geosciences between non-governmental Canadian organizations and foreign non-governmental organizations. To inform the Canadian geoscientific community of the results, benefits and opportunities of such participation.

850068* (3522)	Geochemical, sedimentological, biological and biostratigraphic changes across the Frasnian-Famennian boundary interval (Upper Devonian)	Norford, BS	ISPG	P	MaP	Alta Mack

Obj: To document and assess geochemical, sedimentological, biological and biostratigraphic changes across the boundary interval in Canada and elsewhere and to relate these changes to regional or worldwide events. To develop models to explain such events and such changes and to compare these models with others suggested to explain geochemical anomalies and biological extinctions at other horizons in the record of geological time.

680090 (3523)	Identification of unknown minerals and elemental analysis of sedimentary rocks by X-ray analysis and chemical techniques	Foscolos, AE	ISPG	PG	GC	-

Obj: Quantitative and semiquantitative analysis of layer lattice silicates, mixed layer silicates, clays, minerals and elements submitted by GSC staff, university professors and various government agencies.

680091 (3523)	Clay and clay minerals investigation	Foscolos, AE	ISPG	PG	GC	-

Obj: To improve and develop techniques for routine mineralogical and chemical analyses of clays and Canadian coals; to develop better techniques for quantitative, semi-quantitative and qualitative analyses of clays and clay minerals in sedimentary rocks and coals; to conduct research related to the crystal lattice structure of clay minerals. These studies also determine those parameters that affect: (1) the degree of sediment diagenesis and oil generating potential; (2) migration of fluids from source rocks which carry heavy metals.

730062 (3523)	Development of extraction, identification and correlation systems for organic compounds from sedimentary rocks and crude oils	Brooks, PW	ISPG	PG	GC	-

Obj: To develop, improve and adapt analytical techniques in organic geochemistry in order to facilitate the identification of petroleum source rocks and to assist in source rock-oil and oil-oil correlations. To develop and/or apply statistical methods to the geochemical data generated in the GSC labs and from outside organizations in order to correlate crude oils into genetic families or groups and to improve data handling and storage systems.

760053 (3523)	Hydrocarbon geochemistry of Arctic Archipelago	Snowdon, LR	ISPG	PG	GC	Frank

Obj: To determine presence or absence and quality of petroleum source rocks and petroleum product type so that reasonable gas/oil ratios may be determined; to calculate probable or maximum maturation levels so that maturation isopleths can be plotted and used to map probable petroleum regions; to quantitatively evaluate hydrocarbons dispersed in fine grained rocks in order to estimate relative amounts of petroleum in various regions or plays.

NTS: 98; 88; 78; 68; 58; 99; 89; 79; 69; 59; 49; 560; 340

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
760054 (3523)	Hydrocarbon geochemistry of Canadian East Coast offshore	Snowdon, LR	ISPG	PG	GC	Atlantic Offshore

Obj: To determine presence or absence and quality of petroleum source rocks and petroleum product type so that reasonable gas/oil ratios may be determined; to calculate probable or maximum maturation levels so that maturation isopleths can be plotted and used to map probable petroleum regions; to quantitatively evaluate hydrocarbons dispersed in fine grained rocks in order to estimate relative amounts of petroleum in various regions or plays.

NTS: 14; 3; 10; 11; 20

760063 (3523)	Hydrocarbon geochemistry of northern interior plains and Beaufort Sea	Snowdon, LR	ISPG	PG	GC	Yk Mack

Obj: To determine presence or absence and quality of petroleum source rocks and petroleum product types so that reasonable gas/oil ratios may be determined; to calculate probable or maximum maturation levels so that maturation isopleths can be plotted and used to map probable petroleum regions; to quantitatively evaluate hydrocarbons dispersed in fine grained rocks in order to estimate relative amounts of petroleum in various regions or plays.

NTS: 106; 107; 117

780003 (3523)	Petroleum Resource Evaluation of Western Canada	Osadetz, KG	ISPG	PG	PR	Alta BC Sask Man

Obj: To provide the geological-geochemical framework for the evaluation of resource potential hydrocarbons in Western Canada. This includes the development of a regional framework and the study of specific relevant plays leading to the estimate of the probable extent of undiscovered resources.

NTS: 62 E,F,L,K; 72 E-P; 73 C,D,E,F,K,L,M; 74 D,E; 82 H,I,J,O,P; 83; 84; 93 I,P; 94 A,B,G-K,N,O,P

830005 (3523)	Geological Modelling of Thermal History and Basin Development	Stephenson, RA	ISPG	PG	PR	Alta BC Frank

Obj: To develop and refine techniques for the analysis of the subsidence histories, subsidence mechanisms and thermal histories of sedimentary basins. This is to be done with the view that wherever possible there will be augmentation of other projects by melding expertise. Involve industry. Involve lithoprobe investigators.

NTS: 83; 84; 93; 94

830011 (3523)	Thermal History and Basin Evolution – Canadian Frontier Regions	Skibo, DN	ISPG	PG	PR	-

Obj: Using computer methods and measured organic maturation parameters, to integrate geological and thermal histories in order to better define the hydrocarbon generating potential in unexplored or partly explored sedimentary basins.

840080* (3523)	Petroleum Geology, Sverdrup Basin, Franklinian Geosyncline and Arctic Interior Platform	Podruski, J	ISPG	PG	PR	Frank

Obj: To determine the distribution of source, reservoir and seal rocks for oil and gas accumulation in Paleozoic and Mesozoic rocks of the region and to add thermal, hydrodynamic, and geochemical data into a petroleum oriented basin studies program for the Franklinian and Sverdrup Basins.

NTS: 78 F,G,H; 79 B; 88 E,H,G; 89 A

850023* (3523)	Organic geochemical and maturation studies, Mainland N.W.T. and Yukon	Macqueen, RW	ISPG	PG	PR	Mack Frank Kee Yk

Obj:
1. To investigate maturation profiles of Paleozoic and Mesozoic sedimentary rocks mainly along the Dempster Highway, northern Yukon and N.W.T., in order to better understand their petroleum potential and subsidence history/tectonic setting.
2. To continue studying aspects of the organic geochemistry of the Pine Point lead-zinc deposit and regional settings.
3. To undertake study of the organic petrography of rock of the Howard's Pass lead-zinc deposit, northern Yukon.

850034 (3523)	Mass Transfer to elements in clastic sequences	Foscolos, AE	ISPG	PG	GC	-

Obj: To study mass transfer of elements from shales to sandstones in order to understand the processes of cementation in reservoir rocks and diagenesis of shales. This data will be used to establish mineralogical stability fields for common allogenic components in shales and sandstones.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850045 (3523)	Oil/Source correlation for Northern Interior Plains crudes	Snowdon, LR	ISPG	PG	GC	Mack

Obj: Acquire and analyze oil, condensate and possible source rock samples to make hydrocarbon/source correlations in the Northern Interior Plains. Map probable source distributions once source rocks have been identified in order to predict location of possible undiscovered reserves.

860011* (3523)	Sedimentology of Cretaceous clastics in the western Canada basin	Leckie, DA	ISPG	PG	PR	Alta

Obj: To determine the stratigraphy, environments of deposition and origin of various stratigraphic intervals of the Cretaceous of western Canada, including hydrocarbon reservoirs and source beds. The resulting detailed sedimentology will be related to regional tectonic and eustatic sea level fluctuations and the occurrences of oil and gas pools.

NTS: 72 E; 82 O; 83 L,M; 93 I

860029 (3523)	Petroleum geology of Tertiary, Mesozoic and Paleozoic north of 68° on the N.W.T. and Yukon mainland and offshore	Dietrich, JR	ISPG	PG	PR	Mack Yk

Obj: To provide a reliable and adequate database for assessment by the Geological Potential Subcommittee of the area's hydrocarbon potential and to document, via publications including maps and sections as appropriate, proven and potential hydrocarbon occurrences in the area.

NTS: 97; 107; 117

860031 (3523)	Stratigraphy and sedimentology of the Basal Colorado Sandstone (Cretaceous), Cessford Field, Southern Alberta	Banerjee, I	ISPG	PG	PR	Alta

Obj: i) Define the stratigraphic status of the Basal Colorado Sandstone within the regional stratigraphic framework; ii) Develop an understanding of the sedimentary facies represented by the Basal Colorado Sandstone; iii) Use this understanding as a tool for predicting continuity and geometry of producing zones; and iv) Study the petrography of the sandstones and evaluate the controls on porosity.

NTS: 82

860032 (3523)	Petroleum geology and tectonic history of the sweetgrass arch	Podruski, JA	ISPG	PG	PR	Alta Sask

Obj: To define the location, style, timing, and influence on hydrocarbon accumulation of tectonism in the Sweetgrass Arch region of the Western Canada Sedimentary Basin.

NTS: 72 E,F,G,J,K,L,M,N,O; 82 G,H,I,J,O,P

610269 (3524)	Petrographic examination of coking coals from the Kootenay Group, Alberta and British Columbia	Cameron, AR	ISPG	CG	CT	Alta BC

Obj: To determine the coking properties, and to prepare seam profiles for correlation and environment of deposition studies, of coals of the Kootenay Group.

NTS: 82 G,J,O

750088 (3524)	Investigations concerning the optical properties of coals and dispersed organic materials	Kalkreuth, WD	ISPG	CG	CT	BC Alta

Obj: To provide information on metamorphism and petrographic properties of coal and dispersed organic matter for the GSC geologists, the data to be used for establishing metamorphic regimes for correlation of coal seams and other rock bodies and for estimating paleotemperatures and burial depths. Largely a service project.

NTS: 83 F

760056 (3524)	Resource evaluation and geology of coal deposits of western Canada	Dawson, FM	ISPG	CG	RE	Alta

Obj: To conduct resource evaluation programs required for the National Coal Inventory and to recommend the office and/or field studies to be undertaken to meet the requirements of the inventory program. To acquire industry and provincial government data on Canada's coal deposits. To study the geological framework within which these coals occur. To provide authoritative advice to senior Departmental officials and to scientists in government and industry on the resource potential of Canada's coal deposits. To maintain an up-to-date knowledge of coalfields in Canada.

NTS: 83 A,H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
770047* (3524)	Studies of coal deposits of western and northern Canada	Ricketts, BD	ISPG	CG	CG	Yk Mack Frank

Obj: To provide geologic data for the evaluation of late Paleozoic, Mesozoic and Tertiary coal resources of western and northern Canada; to prepare suitably illustrated geological reports for publication; to provide resource data for the National Coal Inventory.

NTS: 116 B,C,F,G; 106 E,F; 59 E,F,G,H; 96 C,F; 39 H; 49 E,G,H; 58 G,H; 68 H; 340 B; 78 G

770051 (3524)	The relationship between kerogen (type and rank) and chemical extract data, for the purpose of source rock evaluation	Kalkreuth, WD	ISPG	CG	CT	Alta

Obj: To assess kerogen type and degree of maturation by microscopical methods and correlate the results with organic geochemical data.

NTS: 82 J,O

780001 (3524)	Coal Resource Data Management	Mottershead, K	ISPG	CG	RE	-

Obj: To plan and conduct investigations of the methodologies for coal resource assessment in undisturbed and disturbed coal measures. To establish and maintain coal resource data computer files of various coal deposits in Canada and apply, adapt or develop computer programs for the analysis and display of geological data and the compilation of coal resource estimates.

780006* (3524)	Mineral Matter and Trace Element Content of Canadian Coals	Goodarzi, F	ISPG	CG	CT	Alta BC

Obj:
1. To determine if coal basins and seams within basins are specific in terms of mineral matter and trace element content.
2. To enlarge the data base for the interpretation of the depositional regimes within coal basins.
3. To relate mineral matter and trace element content to other compositional parameters.
4. To provide a data bank on environmental and utilization aspects of these coals.

NTS: 82 G,O,N; 83 A; 93 H,L

790013 (3524)	Relationship of reflectance to chemical rank parameters of western Canadian coals	Cameron, AR	ISPG	CG	CT	Sask Alta BC

Obj:
1. To establish reference curves relating rank as determined by reflectance to rank as determined by chemical means.
2. To determine the relationship of varying maceral compositions on rank as determined chemically.

NTS: 62 F; 72 H,G,M; 82 G,H,J,O,P; 83 A,C,E,F,G,M; 93 J,O,P

790022 (3524)	Stratigraphy and sedimentology of the Lower Cretaceous Gething Formation, Rocky Mountain Foothills, Alberta and British Columbia	Gibson, DW	ISPG	CG	CG	Alta BC

Obj: To describe the Lower Cretaceous stratigraphic succession; to collect samples for laboratory studies, and to collect fossil flora and fauna; to provide data on the origin, distribution and continuity of coal seams throughout the region; to attempt to determine criteria useful in determining the sub-environments in which the fluvial-deltaic sediments were deposited, and to eventually provide a regional geological model that will be of assistance in determining the potential coal resources of this and other regions.

NTS: 83 L; 93 I,J,O; 94 B,G

810014* (3524)	Resource evaluation and geology of Canada's coal deposits	Hughes, JD	ISPG	CG	RE	BC Alta Sask

Obj: To conduct resource evaluation programs required for the National Coal Inventory and to recommend the office and/or field studies to be undertaken to meet the requirements of the inventory program. To acquire industry and provincial government data on Canada's coal deposits. To study the geological framework within which these coals occur. To provide authoritative advice to senior Departmental officials and to scientists in government and industry on the resource potential of Canada's coal deposits. To maintain an up-to-date knowledge of coal fields in Canada.

NTS: 83 A,G,H,I,J; 93 O,P; 72 F,G,H; 62 E; 82 G

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810018 (3524)	Regional Coal Rank Variations in the Kootenay Formation and their relationship to the structural history of the Southern Canadian Rocky Mountains	Cameron, AR	ISPG	CG	CT	BC Alta

Obj: 1. To delineate vertical and lateral coal rank variation (by vitrinite reflectance) in the Kootenay Formation of the southern Rocky Mountains and Foothills.
2. To utilize this and stratigraphic/structural data to interpret the relative timing of deformation and the relative contribution to total loading of structural and sedimentological components.

NTS: 82 G,J

810019* (3524)	Regional coalification studies in the Minnes, Bullhead and Fort St. John Groups, N.E. British Columbia	Kalkreuth, W	ISPG	CG	CT	BC Alta

Obj: 1. To determine the regional coalification pattern of the lower Cretaceous Bullhead, Fort St. John and Minnes Groups in the foothills belt of northeastern British Columbia and west central Alberta.
2. To determine the petrographic composition of coal seams in the region to provide further data on coal quality and utilization and on depositional environments of seam formation.
3. Coal rank data and petrographic profiles of seams will contribute to stratigraphic correlations.

NTS: 83 E; 93 I,P

810039* (3524)	Sedimentological studies of coal-bearing Upper Cretaceous and Paleocene formations, Alberta Foothills and Plains	Jerzykiewicz, T	ISPG	CG	CG	Alta

Obj: Establish the stratigraphic and sedimentological framework of Upper Cretaceous and Paleocene formations in the Foothills of Alberta as a basis for evaluation of their coal resource potential. Provide a geological base for the stratigraphic correlation between the coal bearing deposits in the Foothills and those of the Plains.

NTS: Pts 83 A,C; 82 G,H,J,O,P

820001 (3524)	Completion of outstanding Foothills mapping projects	Gibson, DW	ISPG	CG	CG	Alta

Obj: Supervise contract to prepare for final publication geological maps and reports on Blairmore (82G/9), Carbondale River (82G/8), Livingstone River (82J/1) and Beehive Mountain (82J/2) areas in the Foothills of southwestern Alberta.

NTS: 82 G,J

820048 (3524)	Maturity of dispersed organic materials in lower and middle Paleozoic rock, determined by optical and geochemical studies	Goodarzi, F	ISPG	CG	CT	-

Obj: 1. To determine optical and morphological character of dispersed organic materials (D.O.M.) in lower and middle Paleozoic rocks.
2. To examine vertical variation of D.O.M. in boreholes and determine the paleotemperature.
3. To classify the D.O.M. of Lower Paleozoic rocks.
4. To study the influence of a) time of burial (age), b) rate of subsidence (rate to heating), c) genera of specific D.O.M., d) petrological and sedimentological environment.

830027* (3524)	Petrographic Analyses of coals in the Saunders Group, Outer Foothills Belt, Alberta	Cameron, AR	ISPG	CG	CT	Alta

Obj: 1. Determine petrographic character of these coals and establish vertical and lateral changes in petrography.
2. Determination of rank.
3. Investigate possible correlation between petrography and rank changes with sedimentological studies of Jerzykiewicz.

NTS: 82 P; 83 A,F,G

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830043 (3524)	Resource Evaluation and Geology of Coal Deposits of western and northern Canada	Smith, GG	ISPG	CG	-	Alta Sask

Obj: To conduct resource evaluation programs required for the National Coal Inventory and to recommend the office and/or field studies to be undertaken to meet the requirements of the inventory program. To acquire industry and provincial government data on Canada's coal deposits. To study the geological framework within which these coals occur. To provide authoritative advice to senior Departmental officials and to scientists in government and industry on the resource potential of Canada's coal deposits. To maintain an up-to-date knowledge of coal fields in Canada.

NTS: 72 M,G,H; 62 E

840049* (3524)	Stratigraphy and sedimentology of the Lower Cretaceous Hulcross and Boulder Creek Formations, Rocky Mountain Foothills, Alberta and British Columbia	Gibson, DW	ISPG	CG	CG	BC Alta

Obj: To describe the Lower Cretaceous stratigraphic succession; to collect samples for laboratory studies, and to collect fossil flora and fauna; to provide data on the origin, distribution and continuity of coal seams within the Boulder Creek Formation throughout the region; to attempt to determine criteria useful in determining the sub-environments in which the marine-fluvial-deltaic sediments were deposited, and to eventually provide a regional geological model that will be of assistance in determining the potential coal resources of this and other regions.

NTS: 83 L,M; 93 I,O,P; 94 A,B

850035 (3524)	Organic maturation and properties of kerogen and bitumen in clastic and carbonate sequences in the Sverdrup Basin and Franklinian Geosyncline	Goodarzi, F	ISPG	CG	CT	Frank

Obj: To determine the properties (optical, chemical, trace element etc.) and type of kerogen and bitumen in clastic and carbonte sediments. To classify the bitumen, its origin and to make a comparison of bitumen from frontier areas to those occurring in the rest of Canada and to major bitumen occurrences in the world.

NTS: 38; 39; 48; 49; 58; 59; 68; 69; 78; 79; 88; 89; 99

850043* (3524)	Stratigraphic and coal resource analyses of coal bearing basins of Arctic Canada	Ricketts, BD	ISPG	CG	CG	Mack Yk

Obj: To study the coal bearing strata of the Arctic Platform, Franklinian Geosyncline and Sverdrup Basin with special emphasis on the Late Cretaceous-Lower Tertiary Eureka Sound Formation. To provide data for the National Coal Inventory.

NTS: 96 C,F; 78 G; 49 E,G,H; 59 G,H

850044 (3524)	Coal-Paleozoic, Mesozoic and Tertiary, western District of Mackenzie and northern Yukon Territory	Cameron, AR	ISPG	CG	CT	Mack Yk

Obj: Examine the structural framework, burial history, stratigraphy, quality, composition and areal distribution of Upper Devonian, Lower Carboniferous, Lower Cretaceous, Upper Cretaceous and lower Tertiary coal seams in the northern Cordillera and contiguous Interior Platform.

NTS: 96 C,D,E,F; 106 N; 107 B; 117 C,D; 116 O

860023* (3524)	Organic petrology of Canadian oil shale deposits	Kalkreuth, WD	ISPG	CG	CT	NB NS Ont Man BC Frank Mack Kee Yk

Obj: To characterize Canadian oil shales petrographically to determine maturation levels and type of organic materials.

NTS: 11 E; 21 H,I

860024 (3524)	Conversion properties of selected Canadian coals and oil shales in relation to geological age, geological setting and rank and petrographic composition	Kalkreuth, WD	ISPG	CG	CT	-

Obj: To determine the susceptibility of selected coals and oil shales from various geological ages and setting to conversion processes such as hydrogenation and pyrolysis.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
860036 (3524)	Resource evaluation and geology of coal deposits of western Canada	Wrightson, CB	ISPG	CG	RE	Sask

Obj: To conduct resource evaluation programs required for the National Coal Inventory and to recommend the office and/or field studies to be undertaken to meet the requirements of the inventory program. To acquire industry and provincial government data on Canada's coal deposits. To study the geological framework within which these coals occur. To provide authoritative advice to senior Departmental officials and to scientists in government and industry on the resource potential of Canada's coal deposits. To maintain an up-to-date knowledge of coalfields in Canada.

NTS: 72 G,H

720066 (3526)	Evaluation of Canada's petroleum potential	Procter, RM	ISPG	PRAS	-	-

Obj: To create and maintain an inventory of oil and gas resources of all regions of Canada, both discovered (reserves) and undiscovered (potential); to provide data for the analysis of costs and supply of oil and gas; to develop methods of predicting size, rate of discovery, quality, reservoir character and other attributes of the resource base in order to assist in the development and analysis of energy policy.

750023 (3526)	Methodology of petroleum resource evaluation	Lee, PJ	ISPG	PRAS	-	-

Obj: To provide a reliable, effective and statistically valid methodology for estimation of resource abundance.

770053 (3526)	Evaluation of Canada's Potential of Heavy Oil and Oil Sands Resources	Raicar, M	ISPG	PRAS	-	Alta Sask

Obj: To determine the extent of in-place resources; to evaluate various EOR processes to recover these resources; to determine the recoverable portion of these resources; to evaluate the impact of international and national price changes on the recovery of these resources in Canada.

770067 (3526)	Canada Oil and Gas Pool data base-file	Skibo, DN	ISPG	PRAS	-	-

Obj: To incorporate and maintain a data base of all parametric data relevant to the accumulation and exploitation of oil and gas pools in western, frontier and offshore regions of Canada. To provide a data base suited to reserves calculation, resources estimation, input to economic (costing and project development) studies and for application of and research on statistical methodologies for the evaluation of undiscovered hydrocarbon resources potential in all petroliferous regions of Canada.

820031 (3526)	Petroleum Resource Evaluation Interchange	Taylor, GC	ISPG	PRAS	-	-

Obj: To provide a firm basis for petroleum resource evaluation by the analysis of the geological setting and characteristics of hydrocarbon accumulations on a worldwide basis; by establishing and quantifying valid analogs applicable to Canadian basins; and by comparison of method and approaches to resource evaluation used by other governments.

850061 (3526)	Western Canada Basin Petroleum Resources Assessment	Barclay, JE	ISPG	PG	PR	Man Sask Alta BC

Obj: To make an assessment of undiscovered oil and gas potential for Western Canada Sedimentary Basin.

NTS: 62; 72; 73; 74; 82; 83; 84; 93; 94

850062 (3526)	Evaluation of Hydrocarbon Potential of Mackenzie Corridor, Northern Mainland	Hamblin, AP	ISPG	PG	-	Yk

Obj: To assess the hydrocarbon resource potential of the mainland Yukon and Northwest Territories, in the sedimentary basins flanking the Mackenzie River (excluding Mackenzie Delta).

850064 (3526)	Evaluation of the Hydrocarbon Potential of the Arctic Islands	Podruski, JA	ISPG	PG	PR	Frank

Obj: To assess the hydrocarbon resource potential of the Arctic Islands.

NTS: 37-39; 47-49; 57-59; 67-69; 77-79; 87-89; 97-99; 120; 340; 560

850066 (3526)	Habitat of oil – Basin classification hydrocarbon resources	McMillan, NJ	ISPG	PRAS	-	-

Obj: To increase our basic understanding of sedimentary basins particularly to facilitate hydrocarbon evaluation by developing broad basin analogues to use as an inference net for understanding resource dispersal as related to basin tectonics and other regional parameters to define basin classification.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
Lithosphere and Canadian Shield Division						
660006¯ (3531)	Granite studies in the Ennadai-Rankin Inlet region	Davidson, A	LCS	-	SG	Kee
	Obj: To classify the granitic rocks according to age, geological and chemical nature, using geophysical parameters where available and to relate this classification to the regional geology and mineral deposits.					
	NTS: 55 E,F,K,L; 65 H,I					
660009¯ (3531)	East Arm of Great Slave Lake, District of Mackenzie	Hoffman, PF	LCS	-	BS	Mack
	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 reconstruct the Paleogeographic history of the sedimentary basin.					
	NTS: 75 E,L,K; 85 H,I					
670002 (3531)	Operation Bylot	Jackson, GD	LCS	-	NC	Frank
	Obj: To provide a reconnaissance geological survey of a previously unmapped area and describe and interpret the broad geological framework and outline areas of potential economic interest.					
	NTS: 27; 37; 38; 47; 48					
680071 (3531)	Alkaline rocks in Canada	Currie, KL	LCS	-	PET	-
	Obj: To identify and examine occurrences of alkaline rocks in Canada, and to explain their origin, development, mode of emplacement and economic potential.					
690061 (3531)	Operation Penny Highlands	Jackson, GD	LCS	-	NC	Frank
	Obj: To provide a reconnaissance geological survey of a previously unmapped area and describe and interpret the geological framework and outline areas of potential economic interest.					
	NTS: 16 E,K-M; 26 H,P; 27 A,B; 36 P; 37 A,B					
710023¯ (3531)	Granite studies in the Slave Province (Phase 1)	Davidson, A	LCS	-	SG	Mack
	Obj: To classify the granitic rocks according to age, geological and chemical nature, using geophysical parameters where available, and to relate them to the regional geology and to mineral deposits.					
	NTS: 85 I,P					
720052 (3531)	Geology of Indin Lake (86 B)	Frith, RA	LCS	-	BS	Mack
	Obj: To revise and interpret to modern standards the geology of the Precambrian terrane of the area known only through early reconnaissance and semi-detailed mapping.					
	NTS: 86 B					
720056¯ (3531)	Paleomagnetism of the dykes of west Greenland	Fahrig, WF	LCS	-	PMag	-
	Obj: To determine the paleomagnetism of the diabase dyke swarms of west Greenland in order to examine the possible correlation of the rocks of this area with those of Baffin Island and the coast of Labrador.					
720062 (3531)	Volcanic rocks of the Prince Albert Belt	Schau, M	LCS	-	NC	Frank Kee
	Obj: To determine the structure, stratigraphy and petrology of the volcanic rocks of the Prince Albert Group and relationship to the adjacent gneisses and the enclosed basic and ultrabasic rocks; to evaluate the mineral potential of the belt.					
	NTS: 47 A,D; 56 J,K					
730040* (3531)	Archean volcanic studies in the Bear-Slave Province	Lambert, MB	LCS	-	BS	Mack
	Obj: To determine 1) stratigraphic and structural relations; 2) location of volcanic centres; 3) sequence and types of volcanic eruptions and their environment of deposition; 4) relationship of mineral deposits to volcanic stratigraphy and volcanic processes.					
	NTS: 76 B,C,F,G					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
730043 (3531)	Volcanic rocks of the Appalachian region	Bostock, HH	LCS	-	BS	NB NS Nfld

Obj: To determine the physical volcanology, petrology, chemistry, environment, age and tectonic relations of the volcanic rocks of the Appalachian Orogen in order to relate them to the evolution of the orogen and to the formation of associated mineral deposits.

NTS: Pts 2 E/12, 5; 12 H

730044* (3531)	Granite studies in the Appalachians	Currie, KL	LCS	-	PET	NS Nfld NB

Obj: 1. To establish a set of criteria based on field, petrographic and chemical observations, by which granitoid rocks in the Appalachian region can be assigned to a limited number of well defined classes;
2. to establish the physical conditions of emplacement, fractionation trends, solidification history, and subsequent deformation of each of these classes;
3. to relate these classes to the tectonic development of the Appalachian region;
4. to evaluate the economic possibilities of each class, and possible factors enhancing these possibilities.

NTS: 2 E; 12 A,H; 21 G,H

740017 (3531)	Metamorphism in the Canadian Shield	Fraser, JA	LCS	-	NC	Que Ont Man Sask Nfld Mack Frank Kee

Obj: To provide suitable maps and studies on metamorphism of the Shield which will focus on this parameter in such a way as to make a unique contribution to the understanding of the development of the Shield; and to provide regional and local information on metamorphic grade and history which will be of use in evaluating mineral resource potential of the Canadian Shield.

740019 (3531)	Archean felsic volcanic complex near Regan Lake, District of Mackenzie, NWT	Lambert, MB	LCS	-	BS	Mack

Obj: 1. To map in detail the felsic volcanic belt;
2. to establish criteria for the identification and interpretation of metamorphosed felsic volcanic in the Slave Province;
3. to establish a model for the history, environment and processes of volcanism that relate to this part of the Slave Province to provide a basis for resource exploration in this area.

NTS: Pts of 76 B,C,F,G

750006 (3531)	Stratigraphy and petrology of the Natkusiak Basalts, Victoria Island	Baragar, WRA	LCS	-	SP	Frank

Obj: To determine the variation in chemical composition and petrography of the lavas with stratigraphic level, to obtain representative bulk compositions of the flows, to determine relationships between the composition of the flows and associated copper prospects and between the flows and accompanying sills, and to obtain contributory information towards an understanding of late Precambrian tectonic history in the northwestern Canadian Shield.

NTS: Pts of 77 G; 78 B; 87 E,F,G,H; 88 A,B

750011 (3531)	Geology, petrology and economic potential of the anorthosite suite in southern Labrador	Emslie, RF	LCS	-	PET	Nfld

Obj: 1. Comparison of rock types, rock and mineral chemistry, and structures with similar features north of the Grenville Front.
2. Estimation of the grade of regional metamorphism in this part of Grenville Province.
3. Determination of age of the anorthosite suite of rocks.
4. Investigation of the economic mineral potential of the anorthositic rocks.

NTS: 13 B,C,E,F,G; 23 A

750061* (3531)	Lower Paleozoic geology of Eastern Canada	Sanford, BV	LCS	-	SP	Ont Que NB

Obj: 1. To continue detailed and regional studies of Lower Paleozoic terrain of eastern Canada,
- in northern and eastern offshore regions, reconnaissance mapping on an opportunity basis and
- in the southern regions, detailed mapping when required for terrain studies.
2. To study all data that become available from petroleum exploration for purposes of hydrocarbon evaluation of the frontier basins.

NTS: Pts 30; 31; 40; 41; 52; 21

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
750102 (3531)	Regional syntheses, southern Keewatin, Project I	Eade, KE	LCS	-	NC	Kee

Obj: To provide a single comprehensive source for all relevant data on the region; to prepare and have available for presentation broad regional and tectonic synthesis; and to have a designated "expert" who will be thoroughly familiar with the geological data and related economic aspects of the region.

NTS: 65 C

760023 (3531)	Precambrian geology of south-east Ellesmere, Devon and Cobourg Islands	Frisch, T	LCS	-	NC	Frank

Obj: To complete the reconnaissance geological mapping of the northern Churchill Province.

NTS: Pts 38 B; 39 B-H; 48 E-H; 49 A,B,D,E,H

760024 (3531)	Keskarrah Bay map-area, District of Mackenzie, NWT	Henderson, JB	LCS	-	BS	Mack

Obj: To determine the extent and significance of Archean basement rocks in the area; to identify stratigraphic control of base metal mineralization to improve understanding of iron formations and their significance in the region; and to obtain a better understanding of the evolution of an Archean basin in the Slave Province.

NTS: 86 H/2,3,6,7

760026 (3531)	Geology of Penrhyn Fold Belt, Melville Peninsula, NWT	Henderson, JR	LCS	-	NC	Frank

Obj: To determine the structural, metamorphic, stratigraphic and age relations between basement gneisses and migmatites, and the covering Penrhyn Group metasedimentary gneisses and schists. To elucidate the structural development of polyphase folds in an area of high-grade metamorphic rocks. To provide structural-stratigraphic and isotopic age bases for regional correlation.

NTS: 46 O,P; 47 A

760027* (3531)	Redbed sequences in Canada	Chandler, FW	LCS	-	PET	Ont Que

Obj: To determine the origin and sedimentological and tectoic processes that yield redbed sequences; to determine the influences of climate, topography, weathering, sedimentation and diagenesis on their origin; and to determine the processes which contribute to the concentration of economic minerals in redbed sequences.

NTS: Pts 31; 41

760061* (3531)	Regional synthesis of the Grenville Province in Ontario and western Quebec	Davidson, A	LCS	-	SG	Ont Que

Obj: To effect a regional synthesis of the geology of the Grenville Province in Ontario and western Quebec and to interpret the synthesis in terms of the geological evolution of the area, and in cooperation with project 750062, of the Grenville Province as a whole.

NTS: Pts 31; 41; 32

770013~ (3531)	Operation Borden	Jackson, GD	LCS	-	NC	Frank

Obj: A study of the stratigraphy, sedimentology, and economic potential of the upper Proterozoic rocks (EQULULIK and ULUKSAN GROUPS) of northern Baffin and Bylot Islands, and of the relationships between these strata and the underlying basement gneisses. A basin analysis will supply data for comparison and possible correlation with strata of west Greenland and Arctic Canada.

NTS: Pts of 37 A; 38 B,C; 48 A-D

770019~ (3531)	Hepburn Batholith, Hepburn Lake map-area, District of Mackenzie	Hoffman, PF	LCS	-	BS	Mack

Obj: To provide an analysis of the deposition and deformation within a eugeosyncline, and describe the plutonic and metamorphic character of the batholith, in order to reconstruct the tectonic history and understand the significance of the batholithic-eugeosynclinal belt as a whole, including its mineral deposits.

NTS: 86 J,O

770028~ (3531)	Regional Synthesis – Baffin Island: Project I	Jackson, GD	LCS	-	NC	Frank

Obj: Regional synthesis of all aspects of the Precambrian geology of Baffin, eastern Devon and southeastern Ellesmere Islands in the District of Franklin, N.W.T.

NTS: 56-59; 45-49; 34-38; 24-27; 14-16

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
780008 (3531)	Macquoid Lake (W½), Thirty Mile and Tebesjuak Lake map-areas	LeCheminant, AN	LCS	-	NC	Kee

Obj: To interpret the geology of the area to a standard of 1:250,000 mapping, and thereby update the geological data base to improve regional tectonic syntheses. To investigate the structure and metamorphism of Aphebian and Archean gneisses and their relation to the Dubawnt group cratonic cover.

NTS: 65 P (W½); 65 O (E½); 55 M (W½)

780009* (3531)	Healey Lake map-area, District of Mackenzie	Henderson, JB	LCS	-	BS	Mack

Obj: To determine the general structural metamorphic and age relations of rocks on each side of the Thelon Front in order to better understand the nature of the boundary between Slave and Churchill provinces. To evaluate the economic potential of the area and to map it at the scale of 1:250 000.

NTS: 76 B

780012 (3531)	Stratigraphy and geochemistry of the volcanic rocks of the Circum-Ungava Belt	Baragar, WRA	LCS	-	SP	Kee Que

Obj: 1. To determine the petrochemical characteristics and the stratigraphic relationships of volcanic and related rocks of the Circum-Ungava Belt and to clarify the nature of their tectonic setting.
2. To examine the relationships of sheeted dykes to associated volcanic rocks and plutonic complex in the Troodos ophiolite, Cyprus, with a view to understanding the mechanism of formation of the oceanic crust and its possible bearing on Precambrian volcanic belts.

NTS: 44 I,P; 34 E; 35 C,F,K,L

780025 (3531)	Archean Rocks of the Nain Province in Hopedale (13 N), Snegamook Lake (13 K), and Makkovik (13 O) map-areas, Labrador	Ermanovics, I	LCS	-	SG	Nfld

Obj: 1. To produce maps (suitable for publications at 1:100,000) and comprehensive reports on the geology and economic mineral potential of the Archean rocks in these areas.
2. To monitor, compile and synthesize results of the geological mapping of Labrador to be carried out under the Canada – Newfoundland Mineral Development Subsidiary Agreement.

NTS: 13 N,K,O

790009 (3531)	Kamilukuak Lake Map-area, District of Keewatin, N.W.T.	Tella, S	LCS	-	NC	Kee

Obj: To map the bedrock geology of the area at a standard of modern 1:250 000 scale mapping. Emphasis will be placed on the Dubawnt Group rocks, their extent, lithology, and relationship to the basement rocks.

NTS: 65 K,L; 66 H

790024 (3531)	Geology of the Foxe Fold belt (EAST HALF), Baffin Island	Henderson, JR	LCS	-	NC	Frank

Obj: To establish the stratigraphy, structure and metamorphism of the Aphebian sedimentary, volcanic and plutonic rocks in the Piling Group and their relationship to the rocks of the Mary River Group. The structural evolution of Archean "gneiss domes" in the area is also to be studies, and the economic mineral resource potential of the region evaluated.

NTS: A,B,C,D

790025 (3531)	Petrology, mineralogy, geochemistry and mineral potential of a Helikian non-orogenic granitic suite in central Labrador and adjacent Quebec	Emslie, RF	LCS	-	PET	Nfld Que

Obj: To improve understanding of the conditions and processes that control concentrations of U, Sn, Be, W and Mo in non-orogenic granitic suites.

NTS: 32; 22; 12

790029* (3531)	Gneissic basement to the Fury and Hecla Formation and the Autridge Formation	Ciesielski, A	LCS	-	SG	Frank

Obj: To map the basement gneisses adjacent to the Fury and Hecla Formation and the Autridge Formation on Baffin Island at a scale suitable for publication at 1:100 000 or 1:250 000. Emphasis to be placed on basement cover relationships and the relationship of basement geology to radioactive anomalies.

NTS: 47 A,B,D,E,F

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
800005 (3531)	Metamorphism and structure in northeast Superior Province	Ciesielski, A	LCS	-	SG	Que

Obj: 1. To understand the geological evolution of the higher grade metamorphic region of the northeastern Superior Province, and in particular, the relationship between greenstone and granulite terrains.
2. To contribute, through field studies, to compilation of a geological map at 1:1,000,000 scale for NTS 33.

NTS: 33

800006 (3531)	Geology of Beechey-Duggan Lakes area	Frith, RA	LCS	-	BS	Mack

Obj: 1. Map for 1:250,000 published scale.
2. Understand the nature of the Thelon Front.
3. Produce final maps and a report.

NTS: Pts 76 F,G,H; 86 B

800007* (3531)	Metamorphism in the Kisseynew Subprovince	Froese, E	LCS	-	PET	Man Sask

Obj: To study the metamorphic zonation in the Kisseynew Subprovince, from the low grade margin to the granulite facies in the centre, and to determine its relationship to the development of alternating volcanic and sedimentary subprovinces.

NTS: Pts 76 F,G,H; 86 B; 63 J,K,N,O

800008 (3531)	Geology of the Baker Lake map-area	Schau, M	LCS	-	NC	Kee

Obj: To refine and upgrade the 16-mile reconnaissance, with emphasis on the structure and stratigraphy of Archean metavolcanics and Aphebian(?) metasediments, and relationship to gneissic and granitic rocks. The economic potential will be evaluated.

NTS: 56 D

800009 (3531)	Geology of Fort Smith, District of Mackenzie	Bostock, HH	LCS	-	BS	Mack

Obj: To complete mapping of Precambrian rocks at 1:250,000 scale in Fort Smith (75 D) and east part of Little Buffalo River (85 A).

NTS: 75 D, E½, 85 A(E½)

800012 (3531)	Geology of Woodburn Lake map area, District of Keewatin	Fraser, JA	LCS	-	NC	Kee

Obj: To upgrade the 16-mile geological reconnaissance survey made in 1953, in particular to refine interpretations of the stratigraphy and structure of the Proterozoic(?) supracrustal rocks, and to determine their relationship to the granitic basement. To assess the economic potential of the area.

NTS: 56 E

800014 (3531)	Metamorphism of volcanic rocks, Crowduck Bay, Manitoba	Gordon, TM	LCS	-	PET	Man

Obj: Conduct a detailed field and petrologic study of a belt of volcanic and associated sedimentary rocks in order to provide correlation criteria for mapping amphibolites and gneisses equivalent to volcanic belts and elucidate the chemical processes which limit the economic potential of metamorphic rocks.

NTS: 63 J,K,N,O,P; 64 A,B,C

810020 (3531)	Thrust-Fold Belt of Wopmay Orogen – Internal Zone	St-Onge, MR	LCS	-	BS	Mack

Obj: To extend the study of metamorphism, plutonism and structure resulting from collisional orogeny affecting an early Proterozoic continental margin.

NTS: 86 E,F,G

810021* (3531)	Externides of Wopmay Orogen	Hoffman, PF	LCS	-	BS	Mack

Obj: To extend the stratigraphic and structural study of an early Proterozoic passive continental margin and its destruction by collisional orogeny.

NTS: 86 H,I,J,M,O,P; 76 J,K,M

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
820004* (3531)	Geology of Aberdeen Lake and parts of adjoining map areas, District of Keewatin	LeCheminant, AN	LCS	-	NC	Kee
	Obj: To interpret the geology of the area to produce a 1:250,000 geological map that will contribute to a regional geological synthesis. Emphasis is to be placed on study of Proterozoic volcanic-plutonic complexes and the stratigraphic and sedimentologic history of the Thelon Formation.					
	NTS: 66 A,B,C,F,G; Pts 65 O,N					
820006 (3531)	Regional Geological Synthesis, Western Superior Province	Percival, JA	LCS	-	SG	Ont Man
	Obj: To compile and synthesize, in the form of maps and reports, all geological work to date in NTS 52. To outline areas requiring more coverage or update and to evaluate potential problem-oriental studies in order to: 1. improve regional correlation; 2. improve understanding of Superior Province tectonics; and 3. to produce geological maps for publication at 1:1,000,000.					
	NTS: 52; 41					
820007 (3531)	Deep Rose Lake and parts of adjoining map areas, District of Keewatin	Tella, S	LCS	-	NC	Kee
	Obj: To map the bedrock geology at a scale of 1:250,000 in order to determine the tectonic and metamorphic history of the basement complex and that of the supracrustal rocks, and to assess the economic potential of the region. Emphases will be placed on the study of cataclastic to mylonitic zones in the region to determine their distribution and tectonic significance.					
	NTS: 66 B,F,G,H					
820008 (3531)	Geology of Montresor River and Lower Hayes River map areas, District of Keewatin	Frisch, T	LCS	-	NC	Kee
	Obj: The mapping of the supracrustal Chantrey Belt, its extensions and its environs at a scale of 1:250,000.					
	NTS: 66 I; Pts 66 P; 56 L,M,N					
820009 (3531)	Hottah Terrane	Hildebrand, RS	LCS	-	BS	Mack
	Obj: To identify and characterize rocks of the Hottah Terrane, establish their relation to the Great Bear Magmatic Zone, and interpret their role in the Tectonic Evolution of Wopmay Orogen.					
	NTS: 86 D,E					
820010* (3531)	Precambrian Shield Volume "Decade of North American Geology"	Hoffman, PF	LCS	-	BS	Alta Sask Man Ont Que Nfld
	Obj: To produce an up-to-date volume (approx. 300 printed pages), and geological and tectonic maps on the geology of the Canadian Precambrian Shield, (as part of a 20 volume work on the geology of North America – GSA centennial project).					
	NTS: Pts 24; 52; 62; 63; 13; 31; 32; 41; 42					
830008* (3531)	Displacement History of Major Shear Zones in Western Churchill Province	Hanmer, S	LCS	-	SG	Mack Sask
	Obj: To document displacement histories of selected portions of two major shear zones in Churchill Province: MacDonald-La Loche and Grease R.-Black L. zones. To provide structural framework for on-going regional mapping in Mackenzie and Keewatin Districts and north Saskatchewan and to permit re-interpretation of existing maps.					
	NTS: 85 H; 75 E,L; 74 P					
830009* (3531)	Structural studies in the Grenville Province of Ontario and western Quebec	Hanmer, S	LCS	-	SG	Ont Que
	Obj: To examine the strain characteristics of major structural boundaries within the Grenville Province of Ontario and western Quebec, in order to determine kinematic sense and significance of possible differential movements. To relate such kinematic data to current regional synthesis.					
	NTS: 31 E,F; 41					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830010 (3531)	Tinney Hills (76 J)-Overby Lake (76 I W½) map areas	Thompson, PH	LCS	-	BS	Mack

Obj: While mapping the geology of the Archean rocks at 1:250,000 scale emphasis will be placed on the petrogenesis and structure of gneissic and migmatitic rocks and on the age, location and significance of the Thelon Front tectonic zone, the boundary between the Slave and Churchill Structural Provinces.

NTS: 76 G,I,J; 66 L

830029 (3531)	1:1 000 000 Map – western area of south Baffin Island	Taylor, FC	LCS	-	SP	Frank

Obj: To compile a 1:1 000 000 scale map of NTS 36 – to form part of the 1:1 000 000 series of maps.

NTS: 36

840004 (3531)	Volcanic rocks of Kaminak Lake region, N.W.T.	Taylor, FC	LCS	-	SP	Kee

Obj: To collate data gathered and partially processed by Dr. R. Ridler and compile it into a useful report.

NTS: Pts 55 E,K,L

840005* (3531)	Artillery Lake map area, District of Mackenzie	Henderson, JB	LCS	-	BS	Mack

Obj: To analyse and interpret geological data, acquired in the Artillery Lake area, leading to a geological description and development of geological models to be portrayed in a geological map and written report as part of a continuing program of activity in the Thelon Front region, the boundary between the Slave and Churchill Provinces.

NTS: Pts 75 O,P; 76 A,B

840013* (3531)	Granulites of Northern Churchill Province	Schau, M	LCS	-	NC	Frank

Obj: To study 2 new granulite terranes to provide field data on relations within and between high grade complexes and their country rock, as well as determine easily measured variables from samples on hand to provide geological, geophysical and geochemical constraints on models of high grade complex formation and/or emplacement.

NTS: 47 A,B,C,D

840016* (3531)	Etudes des roches Archéennes et Protérozoiques dans la région du Front de Grenville entre Chibougamau et Val d'Or, Québec	Ciesielski, A	LCS	-	SG	Que

Obj:
1. Reconnaissance des séries Archéennes au sub-est de la ZTFG (du zone tectonique du Front de Grenville);
2. Etudes des styles structuraux de part et d'autre de la ZTFG;
3. Comparaison des contextes géologiques de part et d'autre de la ZTFG;
4. Chronologie absolue et relative des gneiss gris et des granitoides adjaçents a la ZTFG.

NTS: 32 B,G,H,I,J

840020 (3531)	Paleomagnetism of Proterozoic igneous and sedimentary rocks of the Precambrian Shield	Fahrig, WF	LCS	-	PMag	Nfld NB NS Que Ont Man Sask Frank Mack Kee

Obj: To measure the paleomagnetism of igneous and sedimentary Proterozoic units of the Canadian Shield for use in determining the correlation of these units, their paleolatitude at the time of their formation, the relative movements of cratonic plates since the formation of these units and to contribute general information on the apparent polar wandering curve for the plates containing these units.

NTS: Pts 12-14; 21-27; 30-39; 40-49; 52-58; 62-66; 73-78; 84-88; 97

840021 (3531)	Study of Gaspé Granites	Whalen, JB	LCS	-	PET	Que

Obj: To improve existing maps of detailed petrochemical and petrologic sampling to establish:
1. the various granite phases and their field relationships;
2. the mineralogy and modal abundances in various phases;
3. the bulk rock major and trace element compositions of units;
4. the mineral phase compositions for magma modelling, and
5. isotope and rare earth geochemistry.

NTS: Pts 22 A,B

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840023* (3531)	Stratigraphy and sedimentology of Silurian rocks of Gaspé	Currie, KL	LCS	-	PET	Que

Obj: To determine the tectonic-stratigraphic setting of the Cabano, Point aux Trembles and Lac Raymond Formations from the provenance, environment of sedimentation, and transporting mechanisms of the sedimentary materials.

NTS: Pts 22 B

840024* (3531)	Geology of the Northern Long Range Mountains, Newfoundland and adjacent areas	Currie, KL	LCS	-	PET	Nfld

Obj: To map and describe the metamorphic and plutonic rocks of the Northern Long Range Mountains and adjacent areas at 1:100,000 or more detailed scale; to determine the geological evolution of this terrane, and evaluate its mineral potential.

NTS: Pts 12 H,I; 2 E

840045* (3531)	Stellarton Basin Analysis	Yeo, G	LCS	-	PET	NS

Obj: During the period 1984-1989 to review, integrate and update the geological data on the late Carboniferous rocks of the Stellarton Graben and adjacent areas, to provide a base for assessment of their coal, oil shale, methane and metal (especially Cu, Pb and U) potential.

NTS: Pts 11 E

850001* (3531)	Tectonic Investigation of the Valhalla Gneiss Complex and Vicinity, Southeast BC	Parrish, RR	LCS	-	G	BC

Obj: To assess the structural kinematics of deformed gneisses in the complex, to perform detailed structural and stratigraphic mapping of the metasedimentary part of the complex, to determine the tectonic relationship between rock units of the dome to the Castlegar gneiss to the south, the Nelson Batholith to the east, the Slocan Sycline to the north, and to the Monashee Complex to the northwest, and to collect rocks for age determinations relevant to formulating a tectonic model for this area.

NTS: 82 F (W½)

850002* (3531)	Chesterfield Inlet (55Ø, and Parts of Tavani (55K/9,16) and Marble Island (55J/13,14) map areas, District of Keewatin, NWT	Tella, S	LCS	-	NC	Kee

Obj: To map the bedrock geology at scales of 1:250 000 (55Ø) and 150 000 (55J,K) in order to determine the distribution, structure, and metamorphism of the basement complex and that of the supracrustal rocks, to distinguish the effects of Kenoran and Hudsonian Orogenies, and to assess the economic potential. Emphasis will be placed on the study of shear zones to determine their tectonic significance.

NTS: Pts 55 J,K,O

850003* (3531)	Cape Smith Fold-Thrust Belt – East End	St-Onge, MR	LCS	-	BS	Que

Obj:
1. Analysis of strain patterns within the Cape Smith fold-thrust belt contrasting ductile strain at low structural levels with brittle strain at higher structural levels.
2. Resolution of horizontal and vertical contributions to the net strain in both the fold-thrust belt and basement culminations.
3. Study of the metamorphic assemblages and derivation of P-T-X-t history of the Cape Smith Belt.

NTS: 35 G,H; 25 E

850004* (3531)	Geology of the Wager Bay "Shear Zone"	Henderson, JR	LCS	-	NC	Kee

Obj: To determine the cause of the intense east-west striking linear aeromagnetic anomaly zone on the south coast of Wager Bay (for reference see G.S.C. Map NQ15-16-17M), its westward extent, and the relationship of rocks north and south to the zone.

NTS: Pts 56 G,H,J; 46 E

850005* (3531)	Geology, Taltston Lake and Fort Resolution Map-areas	Bostock, HH	LCS	-	BS	Mack

Obj; To complete reconnaissance scale mapping of Precambrian rocks within the Talston Lake (75E) and Fort Resolution (86H) map-areas.

NTS: 75 E; 85 H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850006* (3531)	Structural Studies in the Metamorphic Hinterland of Wopmay Orogen	King, JE	LCS	-	BS	Mack

Obj: Structural analysis, evaluation and comparison of autochthonous and allochthonous basement and strain geometries at high and low structural levels in the metamorphic hinterland of Wopmay Orogen.

NTS: Pts 86 B,G,J,K,O

850010* (3531)	Regional Correlation, gold-bearing volcanic belts, Flin Flon-Southend-La Ronge	Froese, E	LCS	-	PET	Sask

Obj: To gain a unified comprehension of large-scale geological features in an area underlain by Kisseynew gneisses and bordered by volcanic rocks of the Flin Flon and Lynn Lake belts. The work will emphasize a stratigraphic subdivision of the Kisseynew gneisses.

NTS: Pts 63 L,M; 64 D

850011* (3531)	Structural studies, Thompson Belt, Manitoba	Froese, E	LCS	-	PET	Man

Obj: To study problems of structural geology in the Thompson Belt. In particular, the work is to concentrate on an investigation of the Pipe 2 mine property of INCO and the immediate vicinity, an area approximately 20 km by 20 km in extent.

NTS: 63 O,P

850014* (3531)	Geological and Geophysical Studies of the Kapuskasing Structure	Percival, JA	LCS	-	SG	Ont

Obj: To carry out and support field and laboratory investigations on the Kapuskasing structure and surrounding region as an integral part of the Kapuskasing Lithoprobe project.

NTS: 41 O,N; 42 B,C,G,I,J; 52 B,C

850015 (3531)	Georesource Studies of the Nain and Churchill Structural Provinces in North River (14E) and Nutak (14F) map-areas, Labrador (Newfoundland and Quebec)	Ermanovics, IF	LCS	-	SG	Nfld Que

Obj: Develop the georesource data base in the study area and construct a model of the Nain-Churchill boundary tectonic zone supported by detailed gravity studies and by modelled magnetic 'total field' data.

NTS: 14 E,F

850016* (3531)	Granites of the Eastern Meguma Terrane	Hill, J	LCS	-	PET	NS

Obj: To raise to a common professional standard, geological knowledge of the granitic rocks, their aureoles and associated mineralization, that lie within the Meguma terrane east of Halifax (63°30'W); to place the granites in the tectonic evolution of the region.

NTS: Pts 11 D,E,F

850017* (3531)	Geology of the southern Long Range	van Berkel, JT	LCS	-	PET	Nfld

Obj: To map the geology and structure of the southern Long Range, Newfoundland, to determine the mesoscopic and megascopic structure and petrology of the units, and to analyze their tectonic position in the Canadian Appalachians.

NTS: Pts 12 A,B

850018* (3531)	Structural analysis of the northern part of the Miramichi Massif	van Staal, C	LCS	-	PET	NB

Obj: To gain a better understanding of the structure and metamorphism of the Bathurst mining camp and related rocks in New Brunswick to develop and constrain a tectonic-evolutionary framework.

NTS: Pts 21

850019* (3531)	Study of the New Brunswick batholith belt	Whalen, JB	LCS	-	PET	NB

Obj:
1. To improve existing maps for petrochemical and petrologic sampling.
2. To establish the mineralogy, modal compositions and whole rock major and trace element and isotopic compositions of the various plutonic rock types recognized by earlier workers (Fyffe et al., 1981).
3. To interpret the implications of granite distribution and petrogenesis for tectonic and metallogenic models of New Brunswick.

NTS: Pts 21 G,J,O,P

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850024* (3531)	Diagenesis and structure of the Albert Formation	Currie, KL	LCS	-	PET	NB

Obj: To determine whether there are large fault offsets within the Albert Formation, and to assess its diagenesis with respect to oil shale and metals potential.

NTS: 21 G, H, I (parts of)

850025* (3531)	Geological evolution of the southwest Churchill Province	Gordon, TM	LCS	-	PET	Man

Obj: To elucidate the tectonic evolution of the southwestern Churchill Province in Manitoba by selected geochronological studies and by related structural and metamorphic studies.

NTS: 63 N,O; 64 A,B,C

850050 (3531)	Subpaleozoic Compilation/Core Drilling	Gordon, TM	LCS	-	PET	Man

Obj: To investigate, map and interpret Precambrian geology beneath Paleozoic cover rocks adjacent to the edge of the Shield south of the Flin Flon – Snow Lake Belt in Cormorant Lake (NTS 63 K) map area.

NTS: 63 K

850059 (3531)	The tectonics of Archean and Proterozoic gneisses bordering the Ungava Trough	Baragar, WRA	LCS	-	SP	Qué

Obj: 1. To map and interpret in tectonic terms the external structural and lithological setting of the Ungava Trough.

NTS: Parts of 35 C,F,K,L

860001* (3531)	Precambrian Shield of the central Boothia Uplift	Frisch, T	LCS	-	NC	Frank

Obj: Geological mapping to 1:250,000 scale of the Precambrian Shield of northern Boothia Peninsula and southern Somerset Island (between 71° and 73°N). The area includes the best exposed crystalline terrane of the Boothia Uplift and a possible extension of the Thelon Tectonic Zone, a major break in the Canadian Shield.

NTS: Pts 67 H,G; 57 G; 58 B

860002* (3531)	Central Great Bear magmatic zone	Hildebrand, RS	LCS	-	BS	Mack

Obj: Complete traverse of central Wopmay Orogen and characterize rocks and structure of the central Great Bear magmatic zone.

NTS: 86 F

860003* (3531)	Geology of the Ashuanipi Granulite Complex in the Schefferville Area	Percival, JA	LCS	-	SG	Que Nfld

Obj: 1. Produce 1:250,000 geological map of the Archean rocks of the Ashuanipi Complex in the Schefferville (23J) map sheet.
2. Study metamorphism and structure of granulites to determine their origin and P-T-fluid composition conditions.
3. Determine ages of rock types, metamorphism and uplift events.

NTS: 23 J

860034* (3531)	Georgian Bay Geological Synthesis	Davidson, A	LCS	-	SG	Ont

Obj: To establish the origins, relationships and histories of rocks along the shore of Georgian Bay that they may be studied in the larger context of Grenville Province geology.

NTS: 41 H, parts of 31 D,E

860035* (3531)	Geology of the Chapleau and Groundhog River Blocks	Percival, JA	LCS	-	SG	Ont

Obj: To improve the geological data base of a portion of the Chapleau and Groundhog River blocks of the Kapuskasing zone and region to the west. To determine the history of metamorphism and tectonics. To correlate the geology with adjacent regions. To determine mineral potential within the region.

NTS: 42 B

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
700018 (3532)	Paleomagnetism and rock magnetism instrumentation and technological development	Christie, KW	LCS	-	PMag	Ont

Obj: To contribute to the development of paleomagnetism as a geophysical method:
1. by designing, building, testing and calibrating instrumentation required for the measurement of magnetic properties of rocks and minerals;
2. by developing new techniques or systems for the routine measurement of magnetic parameters of standard samples and for the processing of data resulting from such measurements; and
3. by improving on the design of existing instrumentation or techniques inorder to improve the efficiency of the laboratory and/or the quality of the data emanating from the laboratory.

800013 (3532)	Vertical Movements of the Precambrian Shield	Buchan, KL	LCS	-	PMag	Ont Que

Obj: To determine vertical movements for structural provinces in the Precambrian Shield from remanent magnetism. The method is quantitative and would allow estimating the net amount of uplift or tilting of the Shield since the Archean.

NTS: 23; 24; 34 C

820005* (3532)	Paleomagnetism of Nipissing diabase and Abitibi dykes.	Buchan, KL	LCS	-	PMag	Ont Que

Obj: To study the magnetic characteristics of the Nipissing diabase and Abitibi dykes and the rocks which they intrude in order to establish the relative ages of observed paleomagnetic components.

NTS: 31; 32; 41; 42

830006* (3532)	Isotopic age determinations and radiogenic trace element studies of rocks and minerals	van Breemen, O	LCS	-	G	Mack

Obj: To precisely establish the chronological order of rocks and events. To apply radiogenic isotope tracer studies to the characterization of rock units in order to further extend the criteria for mapping and to determine the origin of rocks. To aid in the search for economic deposits. To remain at the forefront of geochronological research.

NTS: 75 E,O,P; 76 A,B

830014* (3532)	Metamorphic Processes in the Kisseynew Sedimentary Gneiss Belt	Gordon, TM	LCS	-	PET	Man Sask

Obj: To determine the pressure-temperature history of selected areas in the belt for comparison with modern tectonic models.

NTS: 63 J,K,N,O; 66 A,B,C,D

850007* (3532)	Paleomagnetism of the Appalachian orogen of Eastern Canada	Buchan, K	LCS	-	PMag	Nfld NB NS Que

Obj: To test models of the evolution of Appalachian terranes of Eastern North America during the Paleozoic.

NTS: Pts 1; 2; 11; 12; 21; 22

720080 (3533)	Interpretation of aeromagnetic surveys	Kornik, LJ	LCS	-	LG	-

Obj: To express the significance of aeromagnetic data in terms of lithological structural and metamorphic patterns in support of mineral exploration, geological mapping and nuclear fuel waste disposal programs and to integrate this information with other types of geoscience data.

830026* (3533)	Geophysical Interpretation Abitibi Belt	Schwarz, EJ	LCS	-	LG	Ont Que

Obj:
1. To deduce the general (deep) crustal structure of the Abitibi Belt using geophysical and geological data.
2. To interpret these data in terms of intra-belt structures with particular attention to the continuation and extent of known zones or contacts favourable to metal concentration.

NTS: 32; 42; 52

840037 (3533)	Magnetic Interpretation Techniques	Broome, HJ	LCS	LG	AI	-

Obj: To develop new qualitative and quantitative methods for the geological interpretation of aeromagnetic data as well as the refinement, compilation and documentation of existing methods.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840057* (3533)	Selected contract geophysical surveys in E. Townships, Quebec	Schwarz, EJ	LCS	LG	AI	Que

Obj: To stimulate mining exploration by geophysical surveys. To investigate the possibility of detecting buried placers (Au) and river channels by magnetic survey with particular reference to Chaudiere River Valley Deposits.

NTS: 21; 31

840087* (3533)	Geophysical Interpretation – Precambrian	McGrath, PH	LCS	-	LG	Ont Mack

Obj: To use geophysical data to enhance knowledge of the regional aspects of the Precambrian crust with an emphasis on its third dimension.

NTS: 41; 42; 75 O

Atlantic Geoscience Division

730072* (3541)	Bedrock and surficial geology-Grand Banks	Fader, GB	AGC	RR	SBG	Atlantic Offshore

Obj: To contribute to our knowledge and understanding of the surface and subsurface geology, geologic history, and broad tectonic setting of the Grand Banks; and to aid in the economic evaluation of the region.

NTS: 1; 2; 11

730081 (3541)	East coast potential fields	Macnab, RF	AGC	RR	GPS	Atlantic Offshore

Obj: To acquire and compile potential field data in the Canadian East Coast offshore and adjacent oceanic basins, in support of investigations in various areas: deep composition of passive margins, boundary disputes; frontier energy; and LOS issues.

760015 (3541)	Eastern Baffin Island shelf bedrock and surficial geology mapping program	MacLean, B	AGC	RR	EAOG	Arctic Offshore

Obj: To investigate and map the geology and near surface structure of the rocks occurring at the pre-Pleistocene unconformity on the eastern Baffin Island shelf and adjoining areas. To obtain geophysical data to put bedrock and surficial data in a regional context and to check the validity of geophysical interpretation against bedrock sample data. To investigate the distribution and geological history of the unconsolidated sediments on the eastern Baffin Island shelf and adjoining shelf areas.

NTS: Pts 15; 16; 17; 25; 26; 27; 28; 38

780042 (3541)	Comparative studies of the continental margins of the Labrador Sea and of the North Atlantic	Srivastava, SP	AGC	RR	EAOG	Atlantic Offshore

Obj:
1. To delineate subsurface structure across Labrador and west Greenland margins.
2. To determine the transition from the continental to oceanic crust across the margins.
3. To discuss the subsidence history of the margin as obtained from well data and to relate it to the subsurface structures.

780049 (3541)	Arctic Ocean: Seismic Refraction and Related Geophysical Measurements	Jackson, HR	AGC	RR	OBM	-

Obj: To collect seismic refraction, reflection and related geophysical data in the Arctic Ocean and interpret them at both a regional and global scale to provide:
1. a tectonic history of the Arctic;
2. a model for development of slow spreading ridges and relationship to other spreading centres such as those in Baffin Bay and the Labrador Sea; and
3. a crustal cross-section of the Eurasian Basin to be compared and contrasted to other basins.

800034 (3541)	Rift Processes and the Development of Passive Continental Margins	Keen, CE	AGC	RR	-	Atlantic Offshore Arctic Offshore

Obj: To investigate consequences (i.e. subsidence history, stratigraphy, crustal thicknesses, heat flow, and gravity anomalies) of various processes perhaps responsible for initial rifting. These processes include extension, intrusion, erosion and phase changes in the lower crust. Models of the processes allow predictions of the above observations which can be compared to real data. This allows elimination of models which do not fit the observations and hopefully will lead to a better geological model of the rift processes.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
800035* (3541)	Seismic studies of continental margins and ocean basins of the North Atlantic	Reid, I	AGC	RR	OBM	Atlantic Offshore

Obj: To study the deep crustal structure of passive continental margins. To combine seismic with other geological and geophysical data to infer the detailed geology across the ocean/continent boundary. By application to a variety of margins, to relate the geological structure to models of continental margin evolution.

810031 (3541)	Evaluation of KSS-30 Sea Gravimeter	Loncarevic, BD	AGC	RR	OBM	Atlantic Offshore

Obj: To acquire, field test, and implement operational use of the new sea gravimeter (Model KSS-30).

810037* (3541)	Surficial geology, geomorphology, and glaciology of the Labrador Shelf	Josenhans, HW	AGC	RR	EAOG	Atlantic Offshore

Obj: To gain an understanding of the post glacial sedimentary processes, hydrodynamic regime and iceberg dynamics across the Labrador Shelf; to define the style of glaciation across the shelf; to relate these findings to world wide glacial events; to determine the paleoceanography of the Labrador Sea; to map the surficial geology of the region between Hamilton and Saglek Banks; to assist the offshore industry by providing regional geological data and up-to-date synthesis; to determine the existence and density of seabed hazards.

NTS: 3; 13; 14; 15; 25

810045 (3541)	An Earth Science Atlas of the Continental Margin of Eastern Canada	Srivastava, SP	AGC	RR	EAOG	-

Obj: To provide a means of releasing information generated or compiled by AGC in a standardized form suitable for regional studies.

820003 (3541)	Geology of the Atlantic Margin: Canada	Williams, GL	AGC	RR	-	Atlantic Offshore

Obj: Preparation of a volume with the above title as a contribution to a 25 volume series on the geology of North America celebrating the decade of North American geology.

830002 (3541)	Seismicity Studies of the Eastern Canadian Margin	Reid, I	AGC	RR	OBM	Atlantic Offshore Arctic Offshore

Obj: To investigate the detailed microseismicity of the passive margin: the level of activity, its spatial and temporal distribution, source mechanisms. This will allow better estimates of lithospheric stress distribution and strain rates, and may tell us something about margin evolution as well as the causative mechanism, be it deglaciation or something else. Knowledge of and understanding the seismicity on the continental margin is of course particularly important in view of possible seismic hazard to offshore hydrocarbon activity.

840015 (3541)	Seabed II	Manchester, KS	AGC	PS	-	Atlantic Offshore

Obj: To develop with Huntec '70 Limited, Scarborough, Ontario, the design, manufacture and test of 500m and 2000m deep-towed high resolution seismic and sidescan, geological and bathymetric integrated mapping systems, for the continental shelf and deep ocean depths.

840017 (3541)	A.O.D.P. Site Survey, Labrador Sea	Srivastava, SP	AGC	RR	EAOG	Atlantic Offshore

Obj: To carry out detailed surveys over proposed drill sites in the Labrador Sea involving magnetic, seismic reflection and refraction, coring and heatflow measurements. The purpose of this survey would be to map in as much detail as possible the bathymetry, basement topography, sediment properties and geophysical signatures at each of these proposed sites.

840036 (3541)	Seismic Systems Development	Nichols, B	AGC	RR	OBM	Atlantic Offshore

Obj: To coordinate the procurement, design, construction, and implementation of systems for the acquisition and processing of seismic data.

840056 (3541)	Potential Fields Data Base Operations	Shih, KH	AGC	RR	GPS	-

Obj:
1. Prepare data for national marine geophysical data base and retrieve the data from it.
2. Develop and maintain software for access, manipulation and display the data at AGC.
3. Prepare data for publication.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840085* (3541)	Seismic Refraction along the Canadian Polar Margin	Jackson, RH	AGC	RR	OBM	Arctic Offshore

Obj: To collect seismic refraction data on the continental margin of Northern Canada to provide:
1. Crustal cross-sections of the continental margin to understand its development.
2. Sedimentary thickness and basement structural constraints in order to evaluate petroleum potential of the region.

850020* (3541)	CIGAL – Computer Integrated Geophysical Acquisition and Logging	Loncarevic, BD	AGC	RR	-	-

Obj: To replace BIODAL with a state-of-the-art Data logging device.

850022 (3541)	Analysis of Marine and Satellite Gravity and Geoidal Data	Woodside, J	AGC	RR	-	-

Obj: 1. Analysis of long wavelength components of gravity and geoidal anomalies over continental margins in terms of structure and isostatic response of the lithosphere.
2. Improve expertise and analytical tools for using satellite-derived gravity and geoidal data.

850069* (3541)	Marine gravity investigation of an intrusion in the Gulf of St. Lawrence	Loncarevic, BD	AGC	RR	OBM	Que

Obj: To undertake marine gravity investigations of a large Bouguer gravity anomaly in the vicinity of Sept-Iles and to assist in the interpretation of the data.

NTS: 22 J

850070 (3541)	Regional Geologic and Plate Tectonic History of the Canadian Appalachians	Stockmal, G	AGC	RR	-	-

Obj: To reconstruct and place bounds on the large-scale plate tectonic evolution of the Canadian Appalachians in light of new data (e.g., deep seismic reflection lines) and our current understanding of tectonic processes.

860014* (3541)	Marine deep seismic reflection studies – offshore E. Canada	Keen, CE	AGC	RR	OBM	-

Obj: To acquire and interpret deep multichannel seismic reflection data across the continental margins of Eastern Canada and within contiguous marine regions such as the Gulf of St. Lawrence and Hudson Bay. The major scientific benefit is to allow a more complete understanding of the structure at depth, and hence the evolution of extensional basins, margins, cratonic basins (Hudson Bay) and Appalachian structure (Gulf of St. Lawrence).

860027 (3541)	Ocean Drilling Program in the Labrador Sea and Baffin Bay	Srivastava, SP	AGC	RR	EAOG	-

Obj: To understand the paleocirculation, paleoclimatic and evolutionary history of the Labrador Sea and Baffin Bay regions a set of holes is planned to be drilled in these regions during the months of September and October 1985 as part of Leg 105 of the Ocean Drilling Program. The resulting cores from these holes will be analysed by a team of scientists on board and after the cruise and the results will be published within 3 years after the Cruise.

700092* (3542)	Surficial geology and geomorphology, Mackenzie Bay – Continental Shelf	Blasco, SM	AGC	EMG	SG	Arctic Offshore

Obj: To resolve the stratigraphic and structural relationships of the unconsolidated surficial marine sediments of the Beaufort continental shelf to provide the geological framework necessary for: the delineation of permafrost; the assessment of offshore aggregate supplies; the establishment of engineering design criteria for offshore structures for petroleum exploration and production; the resolution of the Quaternary history of the shelf area; the identification of sedimentary and geomorphic processes operating on the shelf; and to continue development of the technology necessary to conduct surficial marine geological surveys in ice covered areas of the arctic and in shallow coastal waters.

NTS: 87; 97; 107; 117

750043* (3542)	Consulting advice on physical environmental problems in the coastal zone	Taylor, RB	AGC	EMG	SG	Nfld NS NB

Obj: To provide consultation and expertise on environmental problems in the coastal zone of the Maritimes. This advice is to be provided in response to specific requests.

NTS: 10 N; 11 D,K; 21 H,P

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
780021 (3542)	Landsat Calibration for Suspended Sediment Concentration in Marine Coastal Environments	Amos, CL	AGC	EMG	SG	-

Obj: 1. To initiate cooperative research between A.G.C., C.C.R.S. and other marine agencies abroad, with a view to extending a calibration of Landsat radiance vs. suspended sediment concentration. Originally applied to the Minas Basin.
2. To extend the Minas Basin calibration.
3. To relate the available Seasat program to Landsat measures.

780022 (3542)	Sediment Dynamics at the Head of the Bay of Fundy	Amos, CL	AGC	EMG	SG	NS NB

Obj: 1. To determine the mass input, transfer and removal of sediments to Chignecto Bay, inclusive of Shepody Bay and Cumberland Basin.
2. To develop a numerical model to assess the affects of a Fundy Tidal Power Development on the distribution and accretion of sediments.
3. To formulate a methodology of assessing the implications of marine constructions on sediments in macrotidal regions.

NTS: 21; 11

790018 (3542)	Ice Scouring of Continental Shelves	Lewis, CFM	AGC	EMG	SG	Atlantic Offshore

Obj: To investigate the geomorphology and sedimentology of ice scour tracks and their relationship to bathymetry, geology, oceanography and drift ice with a view to interpreting the dynamics and history of ice impacts on the seabed in order to provide advice for resource management.

790019 (3542)	Environmental Geology of Deep Ocean	Buckley, DE	AGC	EMG	G	Atlantic Offshore

Obj: 1. To investigate the capacity of the deep ocean sediments to maintain normal processes and environmental quality under conditions of stress imposed by waste disposal practices and resource exploration and exploitation.
2. To participate in the Seabed Working Group of NEA in order to maintan awareness of progress in feasibility studies for the disposal of high level nuclear waste in the seabed.
3. To participate in studies of the environmental effects of deep ocean mining.

800015 (3542)	Coastal Morphology and Sediment Dynamics, Southeast and East Cape Breton Island, N.S.	Taylor, RB	AGC	SG	CGD	NS

Obj: 1. To provide a map of shoreline features and sediment along SE and E Cape Breton Island.
2. To examine two well developed barrier beaches with different aspect, geological setting and sediment availability in order to determine seasonal changes in beach-nearshore morphology and sediment characteristics and to document the historic changes and response of these beaches to changing environmental conditions.

NTS: 11 F,G,K

800020* (3542)	The Recent Paleoclimatic and Paleoecologic Records in Fjord Sediments	Schafer, CT	AGC	EMG	P	Que BC

Obj: To relate documented climatic excursions that have occurred over the past several centuries to the geological record in unbioturbated fjord sediments recovered from distinctive climatic regimes throughout Canada with a view to the development of predictive models for climatic trends on a 3 to 10-year scale.

NTS: 22; 2; 3; 11; 12

800036* (3542)	Stability and Transport of Sediments on Continental Shelves	Amos, CL	AGC	EMG	SG	Atlantic Offshore

Obj: The scientific objectives of this project are:
1. to determine the sediment stability under waves and currents on continental shelves, because of a serious lack of experimental data in this highly-disputed field;
2. to apply the above predictively to problems related to ice scouring of seabeds, offshore oil production activities, the differentiation of modern and relict features and the dispersal of materials across the continental shelf;
3. to develop a generalized, programmed strategy for application by other users to solve similar problems of sediment stability at other shelf sites.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810036* (3542)	Morphology, sedimentology, and dynamics of Newfoundland coast	Forbes, DL	AGC	EMG	SG	Nfld

Obj: 1. To describe and interpret the geomorphology, sedimentary materials, and stability of the Newfoundland coast, with attention to problems of coastal resource management and oil-spill contingency planning.
2. To investigate the sedimentary facies and physical processes characteristic of selected coastal types and, in particular, of gravel barrier and associated lagoon systems, for which little information is available.

NTS: 1 K,L,M,N; 2 C,D,E,F,M; 11 O,P; 12 A,B,G,H,I,M,P

810041 (3542)	The physical behaviour of suspended particulate matter (spm) in natural aqueous environments	Syvitski, JPM	AGC	EMG	SG	Atlantic Offshore Arctic Offshore Pacific Offshore

Obj: To discover the physical forms and dynamic behaviour of spm so that the vertical flux of spm can be understood for a variety of environments.

NTS: 21; 11

810042* (3542)	Sedimentology of Fjords	Syvitski, JPM	AGC	EMG	SG	Que Frank

Obj: To complete a comprehensive study on the climatology, hydrography, physical oceanography, sediment dynamics, sedimentological history, and animal sediment relationships of west coast fjords (completion of previous NSERC project) and Arctic fjords.

NTS: 22

810047* (3542)	Quaternary geologic processes on Continental slopes	Piper, DJW	AGC	EMG	-	Atlantic Offshore

Obj: To determine why different areas of continental slopes off Eastern Canada have such different surface morphology and surficial geology; to relate this variability to contemporary and Pleistocene processes and paleo-environmental configurations; and to thus develop predictions on subsurface surficial sediment distribution and slope stability and the flux of sediment from the continental shelf to the deep sea.

820044* (3542)	Quantitative Quaternary Paleoecology, Eastern Canada	Mudie, PJ	AGC	EMG	P	Atlantic Offshore

Obj: 1. To quantify the relationship between present microfossil assemblages and the climate/oceanography of the eastern Canadian margins.
2. To apply these quantitative data to analysis of past climatic and oceanographic conditions, e.g. Quaternary glacial-interglacial cycles.
3. To correlate the E. Canadian paleoecological records and relate them to models of global ocean-atmosphere interaction during the Quaternary.

820046* (3542)	Sediment Dynamics and Depositional Processes in the Coastal Zone	Forbes, DL	AGC	EMG	SD	NS NB PEI Alta BC

Obj: To further our understanding of the dynamics of sediment entrainment, transport, and deposition in the coastal zone; of the sedimentology of coastal deposits; and of long-term trends in the development of coastal sedimentary systems.

820050* (3542)	Near-Surface Geology of the Arctic Island Channels (NOGAP)	MacLean, B	AGC	EMG	-	Arctic Offshore

Obj: Through an integrated geological, geophysical and geotechnical research program to investigate and report on seabed geology of the Arctic island Channels, the nature and severity of geological constraints to development and contribute to development of technology related to these studies. Objectives include determination of:
1. Surficial sediment textures, distribution, thickness, geotechnical properties and other parameters in sufficiently many and varied areas as to have predictive capability elsewhere;
2. Litho-, bio- and chronostratigraphy of surficial sediments;
3. Principal contemporary sediment dispersal or modifying processes, e.g. ice scour, winnowing, slumping, faulting, permafrost;
4. Nature of near surface bedrock;
5. History of events and evolution of the channels;
6. Technology development for geoscience studies in ice covered waters.

NTS: 48 B-F; 58 A-G; 59 A-D; 68 A-H; 69 A-D; 78 H; 79 A-D

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830001* (3542)	Permafrost Processes in Arctic Beaches	Taylor, RB	AGC	EMG	SG	Frank

Obj: To determine the thermal regime across Arctic beaches and the factors which affect it so that a numerical model can be designed to predict the depth of thaw using easily obtainable information, i.e. climatic data or sea water characteristics. Other objectives are to determine:
1. the effect of ice-bonded sediment on wave run-up, swash-backwash velocities and wave washover; and
2. the formation, extent and duration of various types of ice features in Arctic beaches including anchor ice.

NTS: 59 B,C; 69 A,D

830007* (3542)	Beaufort Sea Coast	Forbes, DL	AGC	EMG	SG	Yk Mack

Obj: 1. To determine and map the physical characteristics of the Beaufort Sea Coast.
2. To assess processes, sedimentary styles and rates of change in this distinctive coastal environment.
3. To assess the response of coastal systems in the Beaufort Sea to industrial activities such as aggregate extraction, and to provide a sound scientific foundation for regulatory practices and contingency planning in the Beaufort Sea coastal zone.

NTS: 97 C,F; 107 B,C,D,E; 117 A,C,D

830045 (3542)	Quaternary Biostratigraphic Methods for Marine Sediments	Vilks, G	AGC	EMG	P	Arctic Offshore Atlantic Offshore

Obj: 1. Develop foraminiferal biostratigraphy to establish relative ages of Quaternary marine sediments, particularly off eastern and Arctic Canada.
2. Integrate biostratigraphy with independent dating through C^{14}, O^{18} and amino acid analyses and paleomagnetic profiles of sediments.
3. Provide paleontologic sediment dating services to other Quaternary projects whenever appropriate.

830055* (3542)	Facies Models of Modern Turbidites	Piper, DJW	AGC	EMG	-	Atlantic Offshore

Obj: To contribute information on modern turbidite to OERD-ISPG project on facies models for reservoirs in deep water sediments, in particular establishing the relationship between mesotopography and sediment facies in modern deep sea fans.

830056* (3542)	Engineering Geology of the Atlantic Shelf	Parrott, R	AGC	EMG	SG	Atlantic Offshore

Obj: To assess the nature of seabed instabilities and geological constraints to development on the Atlantic Shelf, especially Hibernia and Sable Island regions.

NTS: 1; 2; 3; 11; 14; 15

830057* (3542)	Temporal and Spatial Variation of Deep Ocean Currents in the Western Labrador Sea	Schafer, CT	AGC	EMG	P	Atlantic Offshore

Obj: To trace the axis of the Labrador Sea Western Boundary Undercurrent (WBU) based on evidence of its occurrence inferred from high resolution acoustic methods. To map the paleoposition of deep ocean currents pathways in Tertiary sediments using reflection seismic sections with a view to explaining the paleocurrent regime of the Protolabrador Sea Basin.

840086* (3542)	Ice Island Sampling and Investigation of Sediments (ISIS)	Mudie, PJ	AGC	EMG	P	Arctic Offshore

Obj: 1. To determine the spatial distribution of microfossils, sediment texture, mineralogy and geotechnical properties of the sediment cover on the continental margin of Canada Basin.
2. To define, map and interpret surficial lithofacies on this margin where conditions are probably analogous to glacial stage environments off Eastern Canada.
3. To conduct high resolution biostratigraphic and stable isotope studies of the High Arctic shelf sediments in areas of high sedimentation rates.
4. To correlate paleoenvironmental data from the Canadian Basin Margin with CESAR data from the Central Arctic Ocean.
5. To construct a quantitative sediment budget for the Arctic O. margin.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850021* (3542)	Marine Geotechnical studies of the Canadian Eastern and Arctic Continental Shelves and Slopes	Moran, K	AGC	EMG	SG	Atlantic Offshore

Obj: To determine the geotechnical and physical properties of the surficial sediments of the Arctic and Eastern Continental Shelves for the determination of geologic constraints to offshore and hydrocarbon development; for the regional assessment of foundation conditions during the time frame of hydrocarbon development; for input to the Quaternary history studies of the shelves and slopes; and for input to geological modern processes studies on the continental margins.

860026* (3542)	Sedflux: On the transfer of sediment from land to the continental shelf	Syvitski, JPM	AGC	EMG	SG	-

Obj: 1. To determine the quantity and type of sediment transferred to the coast and then to the marine environment during the late Quaternary by selected rivers in Canada.
2. To understand sediment capture and escape processes on the subaerial delta and prodelta environments, including the formation, preservation or destruction of placer deposits.
3. To discern the effect (on 1&2) of: (a) relative sea level fluctuations; (b) tidal or wave condition variations; (c) fluctuations in discharge conditions; and (d) increased ground accelerations through seismic events.
4. To relate these input functions to delta morphology and architectural growth of sediment facies.

860030 (3542)	Computer based geological map compilations – Offshore Eastern Canada	Fader, GB	AGC	EMG	SG	Atlantic Offshore

Obj: To produce a computer-based series of maps on the geology of the offshore of eastern Canada as a method of updating older published maps, releasing compilation in a more timely way, facilitating the future production of formal maps, and consolidating interpretations. The maps will be released initially on open file.

500029 (3522) (3512) (3543)	Identification and biostratigraphic interpretation of referred fossils	Norford, BS	ISPG C AGC	P MG EPG	-	NS Nfld NB Yk Mack BC Alta Pacific Offshore

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.

NTS: 95 B,C; 12 D; 103 G; 82 E,K; 83 C; 93 I

680102* (3543)	Rank and petrographic studies of coal and organic matter dispersed in sediments	Hacquebard, PA	AGC	EPG	CG	NB Nfld NS Que PEI

Obj: To obtain information on local and regional changes in organic metamorphism, with application towards economic geology, search for oil and gas, and evaluation of properties of coking coals.

NTS: 12; 21; 11 F,G,K; 20

680109 (3543)	Palynological zonation of the Carboniferous and Permian rocks of Atlantic Provinces, Gulf of St. Lawrence and Northern Canada	Barss, MS	AGC	EPG	PGB	NS NB Nfld PEI Yk Mack Frank

Obj: To establish a comprehensive biostratigraphic framework of the Carboniferous and Permian succession and to reconstruct geological events and ecological environments, assist other disciplines to carry out stratigraphic, sedimentological and geophysical studies, facilitating a determination of the three dimensional geometry of the Carboniferous basins for resource evaluation.

NTS: 11 E; 1; 2; 11; 12; 95

710059* (3543)	Stratigraphy and sedimentology of the Mesozoic and Tertiary rocks of the Atlantic continental margin	Jansa, LF	AGC	EPG	SGBM	Atlantic Offshore

Obj: To determine stratigraphy and sedimentology of the Mesozoic and Tertiary rocks of the Atlantic continental margin and the basin; delineate distribution of clastic, carbonate, evaporite sequences, their thickness, composition, provenance, current patterns, depositional environment and porosity development as an aid to the resource evaluation of this region.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
710061 (3543)	Compilation of geoscientific data in the Upper Paleozoic basins of southeastern Canada	Howie, RD	AGC	EPG	PBG	NS NB Nfld PEI

Obj: Compile data for a detailed study of the petroleum potential of the Magdalen and Sydney basins.

NTS: 1; 2; 10; 11; 12; 14; 20

710065 (3543)	Biostratigraphic zonation (Foraminifera-Ostracoda) of the Mesozoic and Cenozoic rocks of the Atlantic Shelf	Ascoli, P	AGC	EPG	SGBM	Atlantic Offshore

Obj: To determine the biostratigraphic zonation (Foraminifera and Ostracoda) of the Mesozoic and Cenozoic in offshore wells of the Atlantic Shelf, to form the basis of local, regional and world wide correlation, and to accurately reconstruct geological events and ecological environments, to aid in the economic evaluation of the region.

720103* (3543)	Hydrocarbon inventory of the sedimentary basins of eastern Canada	Bell, JS	AGC	EPG	SGBM	Atlantic Offshore

Obj: To provide, in a timely manner, geological data related to the hydrocarbon inventory of the sedimentary basins of eastern Canada when requested to do so by the Executive Director, Petroleum Resources Appraisal secretariat.
To assist in the integration and interpretation of geological data used for resource evaluation.

720104 (3543)	Regional subsurface geology of Mesozoic and Cenozoic rocks of the Atlantic continental margin	Wade, JA	AGC	EPG	SGBM	Atlantic Offshore

Obj: To provide a regional subsurface geological interpretation of the Atlantic continental margin of Canada as a basis for:
1. the Departmental Hydrocarbon Inventory;
2. to establish a framework for other specific studies such as lithostratigraphy, biostratigraphy, geochemistry, plate tectonics, etc.

NTS: 21 A,H

740003 (3543)	Geological interpretation of geophysical data as an aid to basin synthesis and hydrocarbon inventory	Grant, AG	AGC	EPG	LBG	Atlantic Offshore

Obj: To define the geologic structure and history of the sedimentary basins in the offshore regions of Eastern Canada.

NTS: 1-16; 27; 28; 38; 39

770004* (3543)	Reconnaissance field study of the Mesozoic sequences out-cropping on the Iberian Peninsula	Jansa, L	AGC	EPG	SGBM	-

Obj: To provide evidence that the sedimentary sequences of the Iberian Peninsula are co-eval with similar sequences beneath the Grand Banks.

770072 (3543)	Geological Survey representative on Steering Committee of the Kremp Palynologic Computer Research Project.	Barss, MS	AGC	EPG	PBG	-

Obj: To represent the Geological Survey and present the views of GSC palynologists to the KPCRP Steering Committee with regard to the operation and management of the project.

810032 (3543)	D.S.D.P. Dinoflagellates	Bujak, JP	AGC	EPG	-	Atlantic Offshore

Obj: Establish a dinoflagellate zonation scheme for the Upper Cretaceous-Cenozoic of the Atlantic. Describe new taxonomy where relevant. Correlate and date this scheme relative to the standard plankton microfossil zonations and Circum-Atlantic onshore stratotypes. Determine stratigraphic-regional distribution of taxa and paleo-environmental/altitude significance of these distributions relative to the history of the Atlantic and related areas. Assess hydrocarbon source potential of sediments beneath the Atlantic using visual kerogen analysis techniques.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810033 (3543)	Biostratigraphy of the Atlantic Shelf and Relevant Areas	Fensome, RA	AGC	EPG	-	Atlantic Offshore

Obj: 1. To analyze palynologically Canadian east coast offshore wells, to apply and refine the already developed palynozonation and to furnish a detailed chronostratigraphic framework for the Mesozoic-Cenozoic strata of offshore eastern Canada.
2. To analyze palynologically Mesozoic-Cenozoic assemblages from other relevant areas as a control for Canadian east coast studies.
3. To develop data bases, including BIOSTRAT, to facilitate refinement of zonations through quantitative biostratigraphic techniques.

810034* (3543)	Maturation Studies	Bell, JS	AGC	EPG	-	Atlantic Offshore

Obj: Determination of organic maturation of the stratigraphic sequences penetrated by selected east coast wells with the aim of establishing time/space relationships for hydrocarbon generation.

810035 (3543)	Taxonomy, Phylogeny and Ecology of Palynomorphs	Fensome, RA	AGC	EPG	-	-

Obj: Taxonomy: To publish formal descriptions of palynomorph assemblages from offshore eastern Canada and other relevant areas. Phylogeny: To resolve and describe phylogenies amongst palynomorphs in order to improve knowledge of the biological groups concerned, their biostratigraphic resolution and their suprageneric classification. Ecology. To assess the paleoecology and plot provincialism of palynomorphs and thus aid the understanding of the paleoenvironmental history of the areas studied.

820041 (3543)	Information Data Base, Offshore East Coast Wells	Williams, GL	AGC	EPG	-	Atlantic Offshore

Obj: To develop computer data base of all geographical, geological and engineering information on offshore east coast wells. To use the data base for handling queries by management on resources. To facilitate research by allowing comparison of data and directing the researcher to more sophisticated data bases.

840039* (3543)	Evolution of east coast Paleozoic Basins	Bell, JS	AGC	EPG	PBG	NS NB PEI

Obj: 1. To obtain an understanding of the sedimentation, tectonics and overall Paleozoic geological evolution of the offshore continental margins of eastern Canada.
2. To incorporate new data as they become available.
3. To use the data compilations and interpretations in resource evaluations of Paleozoic successions.

NTS: 11; 20; 21

840083 (3543)	Regional geology of the sedimentary basins of the continental margin of Newfoundland, Labrador and Baffin Bay	McAlpine, KD	AGC	EPG	-	-

Obj: To further our understanding of the regional geology and evolution of the sedimentary basins of offshore Newfoundland, Labrador and Baffin Bay; to develop maturation models to explain the thermal history of each basin; to generate the necessary data base for resource appraisal estimates and updates.

840084 (3543)	Interpretation of geophysical data from the Scotian Margin and adjacent areas as an aid to basin synthesis and estimation of hydrocarbon potential	MacLean, BC	AGC	EPG	-	-

Obj: To develop a structural and seismo-stratigraphic interpretation from multichannel seismic data on the Scotian Margin, as a means to an updated interpretation of the regional geology and hence oil and gas resource assessment.

850055* (3543)	Quantitative stratigraphy in paleoceanography and petroleum basin analysis	Gradstein, FM	AGC	EPG	-	-

Obj: To develop new approaches to Quantitative Stratigraphy and to apply this to the sedimentary basins of offshore eastern Canada and contiguous areas.

850056 (3543)	Regional geophysics of Mesozoic-Cenozoic of Baffin Bay-Labrador Margin	Bell, JS	AGC	EPG	-	-

Obj: To develop an understanding of the regional geology based primarily on industry multichannel seismic, to delineate oil and gas plays and prospects for input into the resource appraisal program, and to integrate the data with related disciplines to develop sequence stratigraphy models.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850057 (3543)	Sedimentology of east coast formations	Cant, DJ	AGC	EPG	-	Atlantic Offshore

Obj: To study development and destruction of hydrocarbon reservoirs due to diagenetic and post diagenetic changes, and the role of source rocks and hydrocarbons in the development of these reservoirs.

860005 (3543)	Basin Atlases – Offshore Eastern Canada	Bell, JS	AGC	EPG	-	Atlantic Offshore

Obj: To generate and compile the geological information necessary and then to publish basin atlases summarizing the geology of the offshore provinces of Eastern Canada. These basin atlases are intended to summarize present knowledge and provide an accessible overview and introduction for the resource industry and interested professionals.

790036* (3544)	Sediment Dynamics Monitor (Ralph)	Heffler, DE	AGC	PS	-	Atlantic Offshore Arctic Offshore

Obj: To design, build and test an instrument to investigate the dynamics of sediments in water depths ranging from a few metres to 200 M for bottom durations of up to 45 days.

820043* (3544)	Coastal Environments and Processes in the Canadian Arctic Archipelago	Taylor, RB	AGC	EMG	SG	Frank

Obj: To map and analyze the coastal environments of the Arctic Archipelago. To determine the frequency and magnitude of processes affecting coastline stability across the Arctic Islands. To provide information on the physical characteristics of shore types and the processes affecting coastal stability which will serve as background information for the evaluation of man's activities in the coastal zone and in case of an environmental emergency, e.g. oil spill.

NTS: 59 B,C; 69 A-D; 79 A-D

830003 (3544)	Development and Implementation of Cable Handling and Maintenance Procedures	Manchester, KS	AGC	PS	-	-

Obj:
1. To investigate methods of cable handling and maintenance techniques known.
2. To develop a cable handling and maintenance program at AGC and implement it.
3. To acquire equipment necessary to efficiently carry out program.
4. To increase cable life by a factor of two or more, thereby saving money in the long run.

830053* (3544)	Data Inventory	Hardy, I	AGC	PS	-	-

Obj:
1. To provide an inventory of all data collections in AGC.
2. To analyze existing forms of data release and suggest new or improved methods.
3. To compile information on the status of surveys on coastal and offshore Eastern Canada and to prepare reports annually.

840038 (3540)	Ocean Drilling Program: planning	Ross, DI	AGC	-	-	Atlantic Offshore

Obj:
1. To contribute effectively to the national and international planning processes of the Program.
2. To complete planning for drilling in the Labrador Sea and possibly Baffin Bay in 1985, under the auspices of the Canadian Planning Committee.

840061 (3540)	Boundary disputes: St. Pierre and Miquelon; Beaufort Sea	Ross, DI	AGC	-	-	Atlantic Offshore Arctic Offshore

Obj: To manage investigations by AGC and to coordinate surveys by RGG and CHS so as to be able to contribute effectively to advice from EMR to External concerning these disputes in the period 84/85 and 85/86 in matters involving the earth sciences, and hydrography, and prepare to contribute thereafter as may be needed.

Terrain Sciences Division

570148 (3551)	Radiocarbon dating program	Blake, W Jr	TS	-	A	-

Obj: To plan and co-ordinate the radiocarbon dating program of the Geological Survey.

590457 (3551)	Radiocarbon laboratory development and operation	McNeely, RN	TS	QG	-	Ont

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.

NTS: 31 G

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
650027* (3551)	Quaternary of southern Alberta	Stalker, AM	TS	QG	-	Alta Sask

Obj: To gain knowledge of Quaternary stratigraphy, chronology, environments and climates in southern Alberta.

NTS: 72; 73; 82; 83

680031 (3551)	Quaternary stratigraphy of Old Crow Basin and Porcupine River Valleys	Hughes, OL	TS	QG	-	Yk Mack

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.

NTS: 106 E,F; 115 P; 116 I, N E½, O,P; 117 A

690064* (3551)	Quaternary palynology	Mott, RJ	TS	QE	PEc	NS NB Que Nfld

Obj: To study the quaternary palynology of Canada and to provide a biostratigraphic and paleoecologic information service to other scientists within the Division, Branch, or Department as well as other Government Departments and agencies and non-government institutions.

NTS: 11 D,E,F,K,N,O; 20 P; 21 A,G,H,J,O; 12 A,B,H,I

690065 (3551)	Surficial geology, St. Anthony-Blanc Sablon map-areas, Newfoundland	Grant, DR	TS	-	RP	Nfld

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

NTS: 2 M; 12 P

700056* (3551)	Surficial geology, Cape Breton Island, Nova Scotia	Grant, DR	TS	QG	-	NB NS

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 of the stratigraphy and age of Quaternary features and of the history of Quaternary events and environments including glaciation, deglaciation and local sea level change.

NTS: 11 D,E,F,K,N; 21 A,H

710020* (3551)	Surficial geology and land classification, Mackenzie Valley Transportation Corridor	Hughes, OL	TS	QG	-	Mack Yk

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, ground ice, and organic (muskeg) cover of the Mackenzie Valley Transportation Corridor in order to:
1. provide areal knowledge of geology and terrain, bearing particularly in mind the needs of government for terrain information in connection with land use planning, pipeline proposals and other aspects of petroleum development, and engineering construction; and
2. determine the Quaternary history of the region.

NTS: 96 C,D-F; 106 G,H-K,L,M,N,O,P; 107 A; 97 C; 116 N,O,P; 95 M

720078 (3551)	Diatom analysis and paleoecological studies of Quaternary sediments	Federovich, S	TS	QE	PEc	Frank Ont

Obj: 1. To develop diatom analysis as a paleoecological tool in conjunction with palynological and plant megafossil analyses.
2. To provide paleoecological interpretation and biostratigraphic correlations of Recent and Quaternary sediments.

NTS: 38; 39; 48; 49; 59; 340; 560; 41 I; 31 E

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
720081 (3551)	Surficial geology and geomorphology of Central Ellesmere Island	Hodgson, DA	TS	QG	-	Frank

Obj: To provide an inventory of surficial materials, landforms, geomorphic processes (active and inactive) and permafrost conditions, with particular reference to terrain information pertinent to the implementation of territorial Land Use Regulations and to the effects of the terrain on petroleum exploration and related activities.

NTS: Pts 49 C,D,E,G,H; 340 B

730019* (3551)	Light drilling and sampling research and support	Nixon, FM	TS	QG	-	Mack

Obj: To support Section and Division requirements for subsurface information, and to contribute to this aspect of Geotechnique with emphasis on light equipment and remote work by (a) maintaining an expertise in drilling and sampling technique and equipment in order to evaluate proposals and suggest possibilities, and (b) developing and co-ordinating systems and procedures to be employed in Division personnel on appropriate problems.

NTS: 107 C

730027 (3551)	Late Cenozoic fossil insects and Late Cenozoic paleoecology	Matthews, JV Jr	TS	QE	PEc	Ont Que Yk

Obj: To provide biostratigraphic and paleoecologic information on late Cenozoic terrestrial sediments as an aid to interpretation of their age and environment of deposition.

NTS: 21 E,L; 31 G,H,I; 115 L; 116 J,K

740065 (3551)	Surficial geology inventory, Banks Island	Vincent, J-S	TS	QG	-	Frank

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, ground ice and organic cover, and undertake geomorphic process studies in order to provide areal knowledge of geology and terrain that will:
1. aid in the implementation of the Territorial Land Use Regulations;
2. be pertinent to engineering construction, petroleum exploration and related activities;
3. provide data relative to terrain sensitivity rating; and
4. elucidate the Quaternary history of the region.

NTS: 88 B,C,D,F; 97 G,H; 98 A-F

740067 (3551)	Surficial geology-terrain inventory, Bathurst-Cornwallis and eastern Melville Islands	Edlund, SA	TS	QE	PEc	Frank

Obj: Map, describe and explain the surface materials, landforms, ground ice and vegetation in order to provide areal knowledge of geology, geomorphology and terrain as background information suitable for land use management and various aspects of engineering construction and to determine the Quaternary history of the region.

NTS: 68 E-H; 69 A,B; 78 E-H; 79 A,B

740068* (3551)	Surficial geology, Ottawa Valley lowlands	Richard, SH	TS	QG	-	Ont Que

Obj: To map, describe and explain the unconsolidated deposits and landforms of the Ottawa Valley lowlands (31 G, 31 F (parts of) and 31 B (parts of) in order to provide geology and terrain information pertinent to land use planning, agriculture, urban and industrial development, forestry and engineering construction and to determine the Quaternary history of the region.

NTS: Pts 31 B,C,F,G

740072* (3551)	Surficial geology of Newfoundland	Grant, DR	TS	QG	-	Nfld

Obj: To map and describe and explain the unconsolidated deposits and landforms in order to provide areal knowledge of geology and terrain as background information relative to land-use planning, mineral exploration, location of granular deposits, community water-supply problems, forestry, urban and industrial development, and various aspects of engineering construction, and to determine the Quaternary history of the region.

NTS: 1 M; 2; Pts 11 O; 12 A,B,G,H,I

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
750063* (3551)	Quaternary geochronology, Arctic Islands	Blake, W Jr	TS	-	A	Frank

Obj: 1. To establish a chronostratigraphic framework for Quaternary time in the Arctic Archipelago.
2. To investigate the suitability of other methods of age determinations, especially those beyond the range of ^{14}C.
3. To determine rates of crustal movement.
4. To reconstruct environments and events for as much of Quaternary time as possible.

NTS: 25-28; 29 F,G; 35-37; 38 F,G; 39 B,C,E-H; 47; 48 E,H; 49 A,B,D,E,H; 57-59; 67-69; 77-79; 87-89; 97-99; 120; 340; 560

750072 (3551)	Quaternary geology, terrain inventory, northeastern Manitoba	Dredge, LA	TS	QG	-	Man

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, ground ice and organic cover in order to provide areal knowledge of geology and terrain as background information relative to land use planning and engineering construction, to provide data relative to terrain sensitivity rating and to determine the Quaternary history of the region.

NTS: 54 D,E,F,K,L,M; 64 I,J,K,L,M,N,O,P

750076* (3551)	Quaternary geology of the Canadian Cordillera	Fulton, RJ	TS	QG	-	BC Yk Alta Mack

Obj: To gather and synthesize information regarding Quaternary deposits, stratigraphy, geomorphology and chronology of the Canadian Cordillera.

NTS: 82; 92; 93 B,G; 103; 105 M; 115 P

760010* (3551)	Surficial geology, geomorphology and terrain inventory of the Ringnes and adjacent islands	Hodgson, DA	TS	QE	-	Frank

Obj: To map, describe and explain surficial materials, landforms, vegetation and active processes, in order to provide base data necessary for land management, for engineering studies and to determine the Quaternary history of the region.

NTS: 59 B,C,F; 69 A,C,D,E,F; 79 D,E; 68 G,H; 78 H; 88 G,H; 89 A,B

760058* (3551)	Vegetation distribution and relationships to surficial materials and climatic patterns – Arctic region	Edlund, SA	TS	QE	PEc	Frank Mack Kee Yk Que Nfld

Obj: 1. To map and describe vegetation distribution and plant communities as they relate to selected areas of the Arctic.
2. To relate modern vegetation distribution with surficial materials and climatic parameters.
3. To derive data on Holocene vegetation and climate using modern vegetation-climate relationships as an analogue.

NTS: 78 A,B,D; 77 G,H

770030* (3551)	Géologie du Quaternaire, région de l'Outaouais supérieur Québec	Veillette, JJ	TS	QE	-	Que Ont

Obj: Cartographier, décrire et expliquer les dépôts meubles formés de terrain, avec objectifs secondaires de:
1. Fournir des données relatives à l'utilisation du sol, à la prospection et localisation de sable et gravier, aux réserves d'eaux souterraines, à la prospection géochimique.
2. Determiner les propriétés physiques et mécaniques de certain dépôts.

NTS: 31 M,L; 32 C,D,E,F

770031 (3551)	Surficial geology and terrain evaluation, southern Yukon	Klassen, RW	TS	QG	-	Yk BC

Obj: To map, describe and explain the surficial materials and landforms and to provide areal geologic-geomorphic data and knowledge of the stratigraphy, age and history of surficial deposits to provide background information for land-use planning and engineering development.

NTS: 94 M; 95 D; 104 P; 105 A-D,E,J,K,L; 115 A,H,I; 114 P

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
780017 (3551)	Correlation of Quaternary geology; Great Lakes – St. Lawrence Valley region	Gadd, NR	TS	QG	-	Ont Que

Obj: To resolve apparent age discrepancies in Pleistocene stratigraphic sequences of the lower Ottawa – upper St. Lawrence valleys and adjacent Lake Ontario basin. To provide a basis for regional compilation and synthesis of Quaternary geology in southern Ontario and southwestern Quebec.

NTS: 31 B,C,F,G,H,L; 21 E,L,M

780033* (3551)	Quaternary paleoecology, Great Lakes	Anderson, TW	TS	QE	PEc	Ont Que

Obj: To describe, analyze and explain unconsolidated deposits and associated organic remains in 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 background geological information for other scientific studies in the Great Lakes.

NTS: 21 E; 31 B,C-F,G-L; 41 H-K

790005 (3551)	Quaternary geology, Mayo-McQuesten	Hughes, OL	TS	QG	-	Yk

Obj: To map, describe and explain the surficial materials and landforms and to provide areal geologic-geomorphic data and knowledge of stratigraphy, age and history of surficial deposits to provide background information for land use planning, engineering and mineral development.

NTS: 105 M; 115 P; 116 B,C

790027 (3551)	Quaternary stratigraphy Yarmouth region, Nova Scotia	Grant, DR	TS	QG	-	NS

Obj: To document the Quaternary stratigraphy of the southeast coast of Nova Scotia in the vicinity of Yarmouth.

NTS: 11 E,F; 21 H

800019 (3551)	Surficial geology, Cobden area (Quebec part)	Fulton, RJ	TS	QG	-	Que

Obj: To map, describe and explain the unconsolidated deposits and landforms of the Quebec part of the Cobden area (31 G 10) in order to provide geology and terrain information pertinent to agriculture, urban and industrial development and engineering construction and to determine the Quaternary history of the region.

NTS: 31 G 10 (Quebec part)

800024 (3551)	Quaternary geology-terrain inventory, northwestern Manitoba	Dredge, LA	TS	QG	-	Man

Obj: Map, describe and explain the surficial materials and landforms, thermal conditions and active processes to provide knowledge of stratigraphy, age and Quaternary history and areal geologic data with particular reference to engineering construction and mineral exploration.

NTS: 64 J,K,N,O

810004 (3551)	Quaternary geology – terrain inventory, Frances Lake	Dyke, AS	TS	QG	-	Yk

Obj: To map, describe and explain the landforms and Quaternary deposits in order to understand the Quaternary evolution of the area and to provide information relevant to land-use planning and mineral information.

NTS: 105 H

810006* (3551)	Quaternary Geology, upper Fraser River Basin	Clague, JJ	TS	QG	-	BC

Obj: To describe, map and establish the stratigraphy of unconsolidated deposits in order to:
1. reconstruct the upper Fraser River drainage development as an aid to explaining the distribution of placer deposits,
2. provide information pertinent to forestry, land-use planning, urban and industrial development, and
3. to determine the Quaternary history of the region.

NTS: 93 A,B,G,H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810007 (3551)	Quaternary geology-terrain inventory, western Victoria Island	Vincent, JS	TS	QG	-	Frank

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, ground ice and organic cover, and undertake geomorphic process studies in order to provide areal knowledge of geology and terrain that will:
1. aid in the implementation of the Territorial Land Use Regulations;
2. be pertinent to engineering construction, petroleum exploration and related activities;
3. provide data relative to terrain sensitivity rating; and
4. elucidate the Quaternary history of the region.

NTS: 87 A,C,D,E,F,G,H; 88 A,B,C,D; Pts of 77 B,C,F,G; 78 B

810023 (3551)	Quaternary geologic compilation (EG-1 revision)	Fulton, RJ	TS	QG	-	-

Obj: 1. Prepare a volume describing the Quaternary geology of Canada.
2. Prepare a map depicting the surficial materials of Canada at a scale of 1:5 000 000.

810044* (3551)	Quaternary geology-terrain inventory, Prince of Wales Island, King William Island and adjacent mainland Keewatin	Dyke, AS	TS	QG	-	Frank Kee

Obj: To map, describe and explain the Quaternary deposits and landforms in order to understand the Quaternary evolution of the area and to provide information relevant to land-use planning and mineral exploration.

NTS: 66 O,P; 57 B,C; 67 A,D,H; 68 A-D

830017 (3551)	Surficial geology, north-central District of Mackenzie	St-Onge, DA	TS	QG	-	Mack

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, ground ice and organic cover, and undertake geomorphic process studies of the NE¼ and part of NW¼ of 86°N in order to provide areal knowledge of geology and terrain that will:
1. elucidate the Quaternary history of the region;
2. aid in the implementation of the Territorial Land Use Regulations;
3. be pertinent to engineering construction, hydrocarbon transportation and related activities; and
4. provide data relative to terrain sensitivity rating.

NTS: 86 F,G,H,I,J,K,N,O,P

830018* (3551)	Quaternary geology, south-western Victoria Island	Sharpe, DR	TS	QG	-	Frank Ont Que

Obj: To complete a systematic study of the Quaternary geology (Wollaston Peninsula) to determine the character, composition, age, origin and history of the Quaternary sediments and their respective landforms. To develop a more detailed understanding of sediment-landforms for evaluation and/or mapping of adjacent areas of Victoria Island (eastwards). To compare landform-sediment mapping techniques with reconnaissance and landsat mapping methods. To demonstrate application of these studies to land-use planning, engineering route selection, mineral exploration and environmental analysis.

NTS: 77 B,C,D,E,F; 67 B,C,F; Pts 87 A,B,C,D,E,F; 31 C,D,G; 40 P; 41 A

830019 (3551)	Quaternary stratigraphy of the Beaufort Coast, Yukon and District of Mackenzie	Vincent, JS	TS	QG	-	Mack Yk Frank

Obj: To confirm the lithostratigraphy of the extensive suite of Quaternary sediments exposed along the Beaufort Sea Coast. To collect further samples for sedimentological and paleoecological studies in order to understand depositional environments. To collect samples for geochronological studies in order to ascertain the age of the sediments. This will help elucidating the Quaternary history of the area, enable regional correlations to be made and provide essential information for the EG-1 compilation.

NTS: 97 I-P; 107 A-H; 117 A-H

830023 (3551)	Quaternary history and surficial materials of north-western Baffin Island	Dyke, AS	TS	QG	-	Frank

Obj: To map, describe, and explain the Quaternary deposits and landforms in order to understand the Quaternary evolution of the area and to provide information relevant to land-use planning and mineral exploration.

NTS: 47 F,G; 48 B,C; 57 E,H; 58 A,D

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830024* (3551)	Quaternary geology, southwestern Saskatchewan	Klassen, RW	TS	QG	-	Sask Alta

Obj: To establish the Quaternary lithostratigraphy and to describe and map the surface deposits in order to: establish criteria for recognizing units of different ages occurring at the surface; determine the probable location and extent of potential aquifers; and outline the distribution of materials derived from different sources and deposited at different times. The data obtained are critical to understanding the distribution and nature of soil parent material, to resolving long-standing controversies about the extent of glaciation at different times and to further defining the Quaternary framework as an aid to future studies and mapping in southern Saskatchewan.

NTS: 72 F,G,J,K,E,L; 82 H

840001 (3551)	Surficial geology inventory – area of Anderson River map area	Vincent, JS	TS	QG	-	Mack

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, and organic cover, and undertake geomorphic process studies in order to provide areal knowledge of geology and terrain that will:
1. aid in the implementation of the Territorial Land Use Regulations;
2. be pertinent to engineering construction;
3. provide data relative to terrain sensitivity rating; and
4. elucidate the Quaternary history of the region.

NTS: 97

840002* (3551)	Surficial geology inventory – area south of Dolphin and Union Strait	St-Onge, DA	TS	QG	-	Mack

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, and organic cover, and undertake geomorphic process studies in order to provide areal knowledge of geology and terrain that will:
1. aid in the implementation of the Territorial Land Use Regulations;
2. be pertinent to engineering construction;
3. provide data relative to terrain sensitivity rating; and
4. elucidate the Quaternary history of the region.

NTS: 96 B, Pts 96 A,C; 87 A,B,C

840035* (3551)	Géologie du Quaternaire et géochimie des tills de la région Mont-Joli/La Rédemption, Québec	Veillette, JJ	TS	QG	-	Que

Obj:
1. Cartographier les formations en surface à l'intérieur de la région à l'étude.
2. Déterminer la répartition, la hiérarchie et l'infuence relative des divers écoulements glaciaires sur le transport des matériaux.
3. A l'aide des résultats de laboratoire et des travaux de terrain délimiter, s'il y a lieu, les zones de minéralisation.

NTS: Pts 22 A,B,C,G,H

850049* (3551)	Quaternary geology and geomorphology, northern Melville Peninsula	Dredge, LA	TS	QG	-	Frank

Obj: To map, describe and explain the unconsolidated deposits, landform, permafrost conditions and geomorphic processes in NTS 47 C in order to provide areal knowledge of geology and terrain that will:
1. elucidate the Quaternary history of the region, and;
2. provide information for mineral development and land use planning. This project is part of a long term plan to meet the need for Quaternary studies in the circum Foxe Basin region (M. Schau Project No. 840013).

NTS: 47 C

850051* (3551)	Echantillonnage des sédiments meubles, région de l'Ungava, Québec	Veillette, JJ	TS	QG	-	Qué

Obj:
- Comptage de fragments rocheux à environ 800 sites.
- Déterminer le pouvoir tampon des sédiments pour les pluies acides.
- Relevé des indicateurs d'écoulement glaciaire.
- Fournir des données de base pour projets futurs de cartographie dans ce secteur par la Commission géologique du Canada.

NTS: 24 K,L,M,N; 25 D,E; 34 I,J,K,L,M,N,O,P; 35 A,B,C,D,E,F,G

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
860016* (3551)	Quaternary geology-terrain inventory, northeast Victoria Island and Stefansson Island	Hodgson, DA	TS	QG	-	Frank

Obj: Describe and explain surficial geology, with special attention paid to the last glacial stade and bracketing marine events. The source and age of the Viscount Melville Sound ice shelf should be established.

NTS: 78 A,C; B(E½)

860017* (3551)	Quaternary geology of Lake of the Woods area, Ontario	Sharpe, DR	TS	QG	-	Ont

Obj: To supervise the systematic study of the Quaternary geology of the Lake of the Woods region. The study will map and report on the Quaternary geology and drift geochemistry of the region over a four year period as part of a Federal/Provincial Mineral Development Agreement. The program is designed to help stimulate economic activity in the mining industry.

NTS: 52 E,F

860020 (3551)	Quaternary geology, Abitibi area, Quebec	Veillette, JJ	TS	QG	-	Que

Obj:
1. To integrate existing surficial maps into one coherent surficial geology map series at 1:1 000 000 scale, "A" series.
2. To extend mapping initiated in Temiscamingue area, south of 48°N (Project 770030), further north in Abitibi.
3. To provide maps and knowledge of Quaternary geology in one of the most active mining camps in Canada. This information is now seriously lacking.
4. To complement surficial mapping by geophysical, geochemical and drilling programs aimed at locating zones of buried valleys and others of potential interests to mineral exploration. Junction with the subsurface investigation programs done by OGS and Kidd Creek in Ontario should be considered.

NTS: 32 C,D,E,F

860021* (3551)	Surficial mapping in Fort Coulonge area, Quebec	Kettles, I	TS	QG	-	Que

Obj: To complete a systematic study of the Quaternary geology to determine the character, composition, age, origin and history of the Quaternary sediments and their respective landforms that will aid in (a) interpretation of drift composition and provenance, and (b) interpreting sensitivity of surficial materials to acid rain.

NTS: Pts 31 F

680017 (3552)	Sedimentology-engineering geology laboratory development and operation	Pelletier, BR	TS	QE	-	-

Obj: To standardize, develop, and/or bring into use various testing and/or analytical procedures available to the geoscientist; to develop new techniques and instrumentation; to ensure efficient operation of the sedimentology laboratories.

680047* (3552)	Geomorphic processes, Mackenzie Valley-Arctic Coast	Heginbottom, JA	TS	TD	-	Mack

Obj: To investigate the processes involved in the growth of permafrost and ground ice under present day conditions, in order to understand better the processes associated with the past growth of permafrost in northern Canada.

NTS: 96 B-F; 106 E,F,I,P; 116 I,N,P; Pts 97 B,C,D,E,F; 107 A,B,C,D,E,; 117 A,D

690095* (3552)	Properties and provenance of glacial sediments	Shilts, WW	TS	-	SR	Que Ont Nfld NS NB

Obj:
1. To build a data bank comprising chemical, petrologic, and geotechnical properties of till in Canada.
2. To define till provenance regions based on data from objective 1.
3. To clarify mechanisms and scale of glacial dispersal of rocks, minerals and trace elements.
4. To relate regional chemical and petrologic properties of till to engineering, geomedical, and biological problems that can be defined areally.
5. To develop and/or evaluate instrumentation and field techniques capable of providing information on thickness, character and properties of glacial sediments.
6. To derive from the record of lake bottom sediments information pertaining to late-glacial history, environmental changes and seismic events.

NTS: 11 E,F; 21 E,G,I,J,L,N,O,P; 22 A,B; 31 H; 42 A,E,H,I

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
730013 (3552)	Quaternary geology inventory – Southern Keewatin	Shilts, WW	TS	-	SR	Kee

Obj: 1. To produce a map of southern Keewatin showing surficial geology at a scale of 1:500,000 from Chesterfield Inlet south to Manitoba and east of ~97°00'.
2. To produce maps for open filing at scales of 1:125,000 based on 1:250,000 NTS sheets,
3. To collect regional samples of till to describe its sedimentology, geotechnical properties, and geochemistry.
4. To elucidate the history of the south and central portions of the Keewatin Ice Divide.

NTS: 65 A-C,F-K,N-P; 55 D,E,F,L,K,N,O; 66 A-C,F-K,N-P; 56 D

750074 (3552)	Uranium drift prospecting techniques, Lower Kazan River area	Klassen, RA	TS	QG	-	Kee

Obj: To study glacial and postglacial processes that can affect the geochemical properties of till and other sediments and to investigate the use of till in mineral exploration for uranium and other metals.

NTS: 55 M,N,L; 56 C,D; 65 P,I,O; 66 A

770032~ (3552)	Geological characterization of Arctic lakes: sediment properties and sedimentary processes	Adshead, JD	TS	QG	-	Kee

Obj: To characterize Arctic lakes by providing a framework of mineralogical and compositional data on lake sediments and watersheds, and to evaluate postglacial sedimentation and diagenetic processes to assist 1) potential construction activities, 2) environmental impact studies, and 3) mineral exploration programs.

NTS: 66 A,H; 65 A,H,I,P; 55 E,F,M; 56 D,E,N,K

770037~ (3552)	Slope processes and cryogenic movements, Arctic Islands	Heginbottom, JA	TS	TD	-	Frank

Obj: To document the nature, extent and rate of slope processes and cryogenic movements in a high-arctic, permafrost environment, and to determine the importance of surficial material, geomorphology, ground ice distribution, soil thermal and moisture regime, and other factors on them.

NTS: 58 F,G; 68 G,H; 79 B

780002* (3552)	Glacial erosion of the Canadian Shield	Kaszycki, CA	TS	QG	-	Kee Ont Que

Obj: 1. To define and summarize ways of quantifying rates, depths and volumes of glacial erosion.
2. Define parameters that are most influential in controlling glacial erosion on the Shield.
3. To measure glacial erosion in selected test areas.
4. To evaluate recently developed differences of opinion on efficacy of glacial erosion on the Shield.

NTS: 55 E,L,K; 41 I; 21 E,L; 31 D,E

780016* (3552)	Drift prospecting methods and models	DiLabio, RNW	TS	QG	-	Ont Que Nfld Man

Obj: 1. To model glacial dispersal from known sources.
2. To develop drift prospecting methods for use in clay belts.

NTS: 14 D; 24 A; 23 J; 32 C,D; 42 C; 64 B,C,F,G; 42 A; 31 L; 63 A,H; 53 F,K,L,N

780018* (3552)	Surficial geology and Quaternary stratigraphy of north Baffin-Bylot Islands	Klassen, RA	TS	QG	-	Frank

Obj: To provide information on the history and mode of deposition and the distribution and origin of Quaternary sediments in the northern part of Baffin Island and of Bylot Island, for use by environmental and development groups that may require knowledge of the area, and to provide data applicable to drift prospecting techniques.

NTS: 38 B,C; 48 A,D

780035 (3552)	Remote sensing applied to Quaternary geology and mineral tracing	Belanger, JR	TS	QG	-	Yk Kee Que Frank Mack Ont

Obj: To evaluate the potential use of remotely sensed, multispectral data for terrain evaluation, terrain mapping, Quaternary geology and mineral tracing. To apply appropriate processing techniques for remotely sensed data to Quaternary geology and related terrain studies in selected test areas in Canada.

NTS: 66 M; 67 A-C; 87 A-F; 88 A-B; 21 E; 31 G

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
800001* (3552)	Quaternary geology and terrain inventory, Nahanni-Sheldon Lake-Finlayson Lake	Jackson, LE	TS	QG	-	Yk Mack

Obj: To map, describe and explain the surficial deposits, terrain conditions, active geomorphic processes and Quaternary history with specific reference to the significance of Quaternary geology for mineral exploration.

NTS: 105 I,J(S½),G,K,F

800027 (3552)	Sensitivity of surficial sediments to effects of acid precipitation	Kettles, IM	TS	QG	-	Ont Que NB

Obj: 1. To establish baseline data on natural variations of buffering capacities of surficial sediments, with respect to possible loading by acid precipitation in an area of predominantly non-carbonate bedrock.
2. To establish magnitude of natural areal variation of chemical (trace and minor element) components that might be mobilized by loading by acid precipitation.
3. To determine the extent that glacial dispersal has modified the physical and chemical properties of surficial sediments from those that would be expected based on bedrock lithologies alone.

NTS: 31 B,C,D,E,F,G,K,L; 21 J,N,O; 41 A,H

810005 (3552)	Relationship of flood frequency and heavy metal uptake in growth rings of trees	Egginton, PA	TS	TD	GPEG	Ont Mack

Obj: To develop and evaluate a proxy method of determining flood frequency of rivers.

NTS: 31 F,K,L; 42 H,P

810022 (3552)	Permafrost and ground ice map of Canada	Heginbottom, JA	TS	TD	-	Yk Mack

Obj: To compile a revised permafrost and ground ice map of Canada at a scale of 1:5M.

NTS: 106; 107; 116

820038* (3552)	Comparison of geotechnical and geophysical properties of arctic seabed sediments	Kurfurst, PJ	TS	TD	GPEG	Mack Frank Yk

Obj: Development of analytical techniques and models to permit prediction of geotechnical properties of seabed sediments to be made from available geophysical data, for the purpose of aiding safer development of the hydrocarbon resources of the Beaufort Sea area.

NTS: Pts 107 C; 117 D; 77 D

820039* (3552)	Drift prospecting, east-central Labrador	Klassen, RA	TS	QG	-	Nfld

Obj: To develop methods for determining the source of uraniferous boulders contained within or associated with glacial deposits.

NTS: 13 E,F,K,L,N; 14 D,L,M

830015 (3552)	Engineering geology of Canada	Evans, SG	TS	TD	GPEG	-

Obj: To provide engineering geological advice and service as required to departments or agencies of the Government of Canada. To interpret the engineering geological significance and performance of various geological regions of Canada with respect to slope failures or other natural hazards. To assemble selected case histories of natural hazards and/or engineering projects to illustrate the engineering geology of Canada.

830016* (3552)	Landslide hazard in the Canadian Cordillera	Evans, SG	TS	TD	GPEG	BC Alta Yk Mack

Obj: 1. To document the occurrence of landslides in selected geological environments of the Cordillera.
2. To develop landslide mechanism models for slope hazard assessment in selected geological environments.

NTS: 82; 83; 92; 93; 94; 95; 96; 102; 103; 104; 105; 106; 114; 115; 116; 117

830022* (3552)	Periglacial processes, Canadian arctic	Egginton, PA	TS	TD	GPEG	Frank

Obj: 1. To evaluate the distribution and relative importance of periglacial processes.
2. To assess, on the basis of long-term observation and measurement the characteristics, rates and effects on the terrain of periglacial processes.
3. To provide a national basis for evaluating natural and man-made hazards in the arctic environments.

NTS: 77 D

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830025* (3552)	Quaternary stratigraphy, northern Ontario Lowlands	Shilts, WW	TS	-	SR	Ont

Obj: 1. To provide a basis for interpretation of the Quaternary history of the northern Ontario lowlands and adjacent regions.
2. To provide a means for assessment of the geology and economic potential of bedrock beneath an extensive drift-covered area.

NTS: 53 G,H,I,J,P; 43 B,F,L,K,N; 54 A

830028* (3552)	Properties and distribution of permafrost and ground ice	Heginbottom, JA	TS	TD	-	Mack Frank Yk BC Alta

Obj: To provide information on the distribution, classification and properties of frozen soil and ground ice and their dynamic performance when disturbed.

NTS: 107 C; 96; 95; 85; 84; 94 J,K

830052* (3552)	Norman Wells pipeline – performance monitoring	Harry, DG	TS	TD	GPEG	Mack Alta

Obj: To examine the actual impact of the construction and initial operation of the proposed Norman Wells Pipeline upon the geological environment of the upper Mackenzie Valley; to assess the accuracy of predictions of impacts made during the assessment review phase for the pipeline; and to assess the quality of the surficial geology and terrain sensitivity maps of the upper Mackenzie Valley.

NTS: Pts of 84; 85; 94; 95; 96

840014* (3552)	Characterization of ground ice occurrence in northern Canada	Harry, DG	TS	TD	GPEG	Mack Frank Yk

Obj: To develop an understanding of the characteristic forms and quantities of ground ice developed in a range of geomorphic and geological settings and to develop models for the better prediction of ground ice conditions and terrain performance in the permafrost regions of Canada.

NTS: 107; 117 pts

850008* (3552)	Geological and geotechnical conditions, Beaufort Sea coastal zone	Dallimore, SR	TS	TD	GPEG	Mack Yk

Obj: To provide geological and geotechnical information in the terrestrial portion of the Beaufort Sea coastal zone, including information on the surface deposits and landforms; the subsurface geological materials, including permafrost and ground ice conditions; and active geomorphological processes, so as to assist in the orderly development, sitting, design and construction of shore facilities related to the production of hydrocarbons in the Beaufort Sea region.

NTS: Pts 107, 117

860012* (3552)	Glaciology Section, PCSP	Koerner, RM	TS	QE	G	Frank

Obj: This project will record expenditures on scientific activities carried out by the glaciology section recently transferred from PCSP.

720102 (3550)	Marine Science Atlas of the Beaufort Sea	Pelletier, BR	TS	QE	-	Mack Frank Yk

Obj: To compile known marine aspects of the Beaufort Sea including oceanography, biology, bathymetry, geology, geophysics, etc., in order to present a marine science atlas of the Beaufort Sea that will include maps, sketches, photographs and graphs. This atlas will serve the public, universities, industry and various agencies of government on engineering, environmental and resource-development programs.

NTS: 97 C,F,G; 107 A,B,C,D,E; 117 A,B,C,D

780026 (3550)	Quaternary paleo-sealevel map of Canada	Pelletier, BR	TS	QE	-	-

Obj: To produce a synthesis of sealevel phenomena for the Quaternary period.

Geophysics Division

650007* (3567)	Ocean aeromagnetics	Bower, ME	G	A	-	Arctic Offshore

Obj: 1. To contribute to the development of high resolution airborne magnetometry.
2. To obtain aeromagnetic data for the Magnetic Anomaly Map of North America.
3. To investigate the validity of theories postulating the magnetic imprinting of oceanic rocks, ocean floor spreading and continental drift.
4. To delineate sedimentary basins on the Canadian and adjacent continental shelves.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
680081* (3567)	High resolution aeromagnetics (experimental surveys)	Olson, DG	G	A	-	Ont

Obj: To execute, according to prescribed specifications, high resolution experimental aeromagnetic and/or gradiometer surveys, over areas selected and defined by management, as a means of testing the effectiveness of the GSC aeromagnetic system in different geological contexts.

NTS: 40 O,P; 41 A,G,H,J,K; 31 D

760065 (3567)	Digital Compilation of Queenair Aeromagnetic Data	Anderson, KW	G	A	GDP	-

Obj: 1. Compilation and publication of aeromagnetic contour maps relating to the yearly GSC Queenair airborne survey operations.
2. Improve modes of operations and presentations of the above data as new computer facilities develop.
3. Maintain up-to-date bank of data described above for ready retrieval for interpretation purposes.

770015 (3567)	High Resolution Aeromagnetics (Instrumentation Development)	Sawatzky, P	G	A	-	-

Obj: To improve the performance of the GSC experimental high resolution/gradiometer survey system, in terms of sensitivity, precision, reliability, efficiency and endurance.

820024 (3567)	Magnetic Anomaly Maps of Canada	Dods, SD	G	A	GDP	-

Obj: 1. To produce a series of composite magnetic anomaly maps in colour at a scale of 1:1,000,000 to be issued by the Geological Survey of Canada.
2. To produce a 5th edition of a 1:5,000,000 composite magnetic anomaly map of Canada (1255A).
3. To compile a composite magnetic anomaly map of North America at a scale of 1:5,000,000.
4. To provide a bank of digital aeromagnetic data.

820027 (3567)	Development of Regional Geophysical Data Processing and Interpretation Methods	Teskey, DJ	G	A	GDP	-

Obj: To adapt or develop, as required, techniques for compilation, display and interpretation of airborne geophysical data in order to advance the utility of the data for regional mapping.

840040 (3567)	Aeromagnetic Survey Contract: Northwestern Baffin Island	Ready, EE	G	A	CS	Frank

Obj: To provide adequate aeromagnetic coverage of the above area as an aid to geological mapping and as a stimulation to mineral exploration in the area.
The contract entails the acquisition and compilation of approximately 64,000 line kms. of digitally-recorded medium sensitivity aeromagnetic data extending over approximately 71 1:50,000 map sheets.

NTS: 48 A,B,C,D; 58 A,D

840065* (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Manitoba (MDA 1984-89)	Ready, EE	G	A	CS	Man

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada-Manitoba Mineral Development Agreement 1984-1989.

NTS: Pts 63 J,K,N; 64 B,C; 52 E,L,M

840067 (3567)	Aeromagnetic Surveys, Digitization and Compilation of Existing Aeromagnetic Data Contract: Juan de Fuca Strait to Dixon Entrance	Knappers, WA	G	A	CS	BC

Obj: To provide a comprehensive aeromagnetic data base of the above area as an aid to exploration of the Pacific Margin Basin. The contract entails the acquisition and compilation of approximately 27,000 line kms. of digitally-recorded medium sensitivity aeromagnetic data extending over approximately 60 1:50,000 map sheets as well as the digitization and adjustment of existing industrial aeromagnetic data amounting to 30,000 line kilometres approximately.

NTS: 92 C,D,E,F,L; 102 I,O,P; 103 A,B,C,F,G,J,K,L

840068 (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Saskatchewan (MDA 1984-89)	Ready, EE	G	A	CS	Sask

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada-Saskatchewan Mineral Development Agreement 1984-1989.

NTS: Pts 63 K,L; 64 D, 74 A

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840069 (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Eastern Township – Quebec	Ready, EE	G	A	CS	Que

CURRENT INFORMATION NOT AVAILABLE

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Federal Asbestos Initiatives Program.

NTS: Parts of 21E/4; 21E/11; Part of 21E/14; Part of 31H/1; Pts 21 E; 31 H

840070 (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Gaspé Peninsula – Quebec	Ready, EE	G	A	CS	Que

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada/Gaspé Lower St. Lawrence Economic Development Plan.

NTS: Pts 22 A,B,H

840071* (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – New Brunswick (MDA 1984-89)	Ready, EE	G	A	CS	NB

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada-New Brunswick Mineral Development Agreement 1984-1989.

NTS: Pts 21 J,O,P

840072* (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Nova Scotia (MDA 1984-89)	Ready, EE	G	A	CS	NS

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of Canada-Nova Scotia Mineral Development Agreement 1984-1989.

NTS: Pts 20 P; 21 A,H; 11 D,E

840073* (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Newfoundland (MDA 1984-89)	Ready, EE	G	A	CS	Nfld

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada-Newfoundland Mineral Development Agreement 1984-89.

NTS: Pts 12 A,H; 2 E

840074 (3567)	Aeromagnetic Surveys: Beaufort Sea Northern Yukon Territory	Knappers, WA	G	A	CS	Yk Frank

Obj: To carry out an aeromagnetic survey of the western Mackenzie Delta adjacent to an offshore area to be aeromagnetically surveyed in the Beaufort Sea to provide data for the Boundary Dispute Program.

NTS: Pts 107 B,C,D,E,F,G,H; 97 F,G; 117 A,B,C,D,E,F,G,H

850060 (3567)	Aeromagnetic Survey – Laurentian Channel	Knappers, WA	G	A	CS	Nfld NS

Obj: To carry out a medium sensitivity aeromagnetic survey comprising approximately 77400 l/km over the Laurentian Channel and part of Cabot Strait, overlapping southern Newfoundland and eastern Nova Scotia in order to provide data for the boundary dispute program.

NTS: 1 E,K,L,M; 11 F,G,H,I,J,K,O,P

850065 (3567)	East Newfoundland Shelf – Orphan Knoll	Knappers, WA	G	A	CS	Atlantic Offshore

Obj: To conduct digitally-recorded high sensitivity GPS/Loran-C controlled aeromagnetic surveys comprising 116,000 l/km for inner area on a cost sharing basis with 5 oil companies headed by Chevron Standard Canada Ltd. and approximately 12,000 l/km of profiles covering the outer area.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
860013* (3567)	Vancouver Island and British Columbia Coast	Knappers, WA	G	A	CS	BC

Obj: To carry out a medium sensitivity aeromagnetic survey comprising approximately 37,000 l/km over part of Vancouver Island, Queen Charlotte Strait-Johnstone Strait-Strait of Georgia to the B.C. shoreline in order to provide digital data and total field contour maps for the MDA and A-Base programs.

NTS: 92 B,C,E,F,G,K,L,M

860025* (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Western Ontario	Ready, EE	G	A	CS	Ont

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada-Ontario Mineral Development Agreement 1985-1990.

NTS: Pts 42 E; 52 C,E,F,H

6.1.1.01	Operation of standard and regional seismograph stations	Halliday, RJ	G	-	S	-

Obj: To operate the Canadian Seismograph Network of standard and regional seismic stations to international standards for the detection and location of all Canadian earthquakes above magnitude 3.5.

6.1.1.02	Maintenance of standard and regional stations	Thomas, JT	G	-	S	-

Obj: To maintain the facilities and instrumentation of the standard and regional stations of the Canadian Seismograph Network: to ensure that all instrumentation is calibrated at least once every five years and to close stations and establish new ones as program needs dictate.

6.1.1.04	Operation and maintenance of digital telemetry networks	Thomas, JT	G	-	S	-

Obj: To operate and maintain the local and regional digital telemetry seismic systems in eastern Canada.

6.1.1.05	Field instrumentation maintenance and development	Trigg, DF	G	-	S	-

Obj: To ensure the availability of appropriate seismological instrumentation for temporary field surveys of seismicity and crustal structure experiments by maintaining existing equipment in fully working order and by developing new instrumentation as technology allows and needs dictate.

6.1.2.01	Management of standard and regional station data	Halliday, RJ	G	-	S	-

Obj: To ensure the preservation and dissemination of Canadian seismological analogue data and information derived from these stations and to ensure that their quality is to international standards.

6.1.2.02	Management of data laboratory and analysis of digital station data	Lyons, JA	G	-	S	-

Obj: To ensure the preservation and dissemination of Canadian digital seismological data and information and to ensure that its quality is to international standards.

6.1.2.03	Development of machine-based systems for seismic data analysis	Lyons, JA	G	-	S	-

Obj: To develop and integrate into the Data Lab new systems to facilitate the detection, analysis, storage, and retrieval of digital seismic data.

6.1.3.01	Determination of Canadian Seismicity	Wetmiller, RJ	G	-	S	-

Obj: To determine the focal parameters and macro-seismic effects of Canadian earthquakes to the degree possible using all available data; and to disseminate this information to all users in a timely manner.

6.1.3.05	Studies of Earthquake Precursory Phenomena	Buchbinder, GGR	G	-	S	-

Obj: To undertake the seismological experiments and analyses in the Branch program of investigation of precursory geophysical phenomena in the Charlevoix zone of the St. Lawrence Valley, as an assessment of the applicability of earthquake prediction techniques to Canada.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
6.1.3.08	Seismotectonics and seismic hazard on the eastern and northern continental margin	Adams, JE	G	-	S	-
	Obj: To determine the spatial and temporal patterns of seismicity in the coastal regions of eastern Canada and the eastern Arctic, to relate these to the structural, geological and geophysical features of the ocean floor and continental margin, and to assess the associated seismic hazard with special reference to potential resource development areas.					
6.1.3.14	Physics of earthquake sources in eastern and northern Canada	Hasegawa, HS	G	-	S	-
	Obj: To employ results of research on the physics of earthquake sources in eastern and northern Canada to improve understanding of the earthquake process and estimates of seismic hazard.					
6.1.3.16	The Nahanni, Northwest Territories earthquake sequence	Wetmiller, RJ	G	-	S	-
	Obj: To analyze all data available for the Nahanni, Northwest Territories earthquake sequence in order to establish: the extent of the source volume, the focal parameters of the principal shocks; the state of crustal stress during the sequence; the macro-seismic effects; the surficial geological effects; the seismotectonic setting and the implications to seismic risk. To disseminate the results to the scientific and engineering communities as quickly as possible.					
6.1.3.17	Seismological studies for Nuclear Fuel Waste Management Program	Wetmiller, RJ	G	-	S	-
	Obj: As part of the EMR-AECL Nuclear Fuel Waste Management Program to carry out regional monitoring of northern Ontario to augment the seismicity data base and improve the estimates of seismic hazard for the eventual validation of acceptable sites.					
6.1.3.18	Propagation and attenuation of seismic waves; magnitude studies	North, RG	G	-	S	-
	Obj: To improve knowledge of the velocity and attenuation of seismic waves in order to improve the accuracy of earthquake locations and the estimation of earthquake size by magnitude and other means.					
6.1.5.01	Seismological data monitoring and exchange	Trigg, DF	G	-	S	-
	Obj: To develop an improved ability to detect and to identify underground nuclear explosions and to assess their seismological consequences.					
6.1.5.02	Arms Control Studies	Basham, PW	G	-	S	-
	Obj: To provide advice to the Department of External Affairs on all matters pertaining to seismological verification of a ban on underground nuclear explosions.					
6.1.6.01	Provision of management and administrative support for the Seismology Section	Basham, PW	G	-	S	-
	Obj: To provide overall management and administrative support to the Seismology Section through the office of the Chief of the Section.					
6.3.1.01	Operation of Geomagnetic Observatories	Jansen Van Beek, G	G	-	GMag	-
	Obj: To operate the Canadian Geomagnetic Observatory Network, including negotiation and supervision of contracts, training of personnel and provision of standards, calibration and quality control.					
6.3.1.02	Surveys for secular variation and special charts	Newitt, LR	G	-	GMag	-
	Obj: To conduct surveys of the geomagnetic field over Canada in order to provide up-to-date magnetic charts and secular variation information.					
6.3.1.03	Development and maintenance of instrumentation for observatories and surveys	Thomas, JT	G	-	GMag	-
	Obj: To develop new and improved instruments for the Canadian Geomagnetic Observatory Network and temporary variation stations, and to calibrate, service and repair the existing equipment.					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
6.3.2.01	Geomagnetic observatory data	Jansen van Beek, G	G	-	GMag	-
	Obj: To maintain, update and disseminate geomagnetic observatory data and to monitor quality of output including accuracy and reliability.					
6.3.2.02	Geomagnetic survey data	Newitt, LR	G	-	GMag	-
	Obj: To maintain, update and disseminate magnetic charts, reference fields, magnetic models, and reports on the geomagnetic field over Canada.					
6.3.2.05	Development and maintenance of data laboratory hardware and software	Vishnubhatla, SS	G	-	GMag	-
	Obj: To design, develop, maintain, repair and update laboratory facilities, including software, for transcribing, processing and editing digital geomagnetic data.					
6.3.3.01	Prediction of geomagnetic disturbances	Coles, RL	G	-	GMag	-
	Obj: By analyzing time-varying magnetic fields, solar activity, magnetospheric and ionospheric electrodynamics, and interplanetary magnetic fields, to develop improved methods for the prediction of geomagnetic storms and substorms.					
6.3.3.02	Provision of geomagnetic activity forecasts and information	Hruska, J	G	-	GMag	-
	Obj: To provide short- and long-term forecasts of geomagnetic activity throughout Canada, and to disseminate information on the variation of the earth's magnetic field.					
6.3.3.03	Secular variation and main geomagnetic field studies	Haines, GV	G	-	GMag	-
	Obj: To study the behavior of the main geomagnetic field and its secular variation; to develop and test model representations of the field; and to investigate casual processes.					
6.3.4.11	Development and maintenance of instrumentation for earth structure studies	Trigg, DF	G	-	GMag	-
	Obj: To design, develop, construct, test, standardize, maintain, repair and update, by contract or in-house instruments and laboratory facilities for geomagnetic studies of earth structure.					
6.4.1.02	Gravity mapping of Arctic Island Channels	Halliday, DW	G	-	Grav	-
	Obj: To complete the regional gravity mapping of the Arctic inter-island in cooperation with the Polar Continental Shelf Project (PCSP) and the Canadian Hydrographic Service (CHS) and to complete regional gravity mapping of the Arctic Islands by 2005.					
6.4.1.06	Systems development and instrument maintenance	Goodacre, AK	G	-	Grav	-
	Obj: To provide systems engineering, instrument maintenance and a research laboratory facility in order to maintain and upgrade all field instruments, data acquisition systems and associated software to ensure their reliability and accuracy.					
6.4.1.13	Gravity mapping of Eastern Canada	Cooper, RV	G	-	Grav	-
	Obj: To complete the regional gravity mapping of Eastern Canada and the adjoining offshore areas.					
6.4.1.15	Augmented Gravity Mapping Program (DND-DMA)	Boyd, B	G	-	Grav	-
	Obj: To observe additional gravity stations in selected areas of Canada where present coverage is sparse or absent.					
6.4.1.16	Localized gravity surveys	Halliday, DW	G	-	Grav	-
	Obj: To intensify regional gravity mapping or to supplement regional coverage with profiles, as required, over local geological targets.					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
6.4.1.17	Canadian absolute gravity service	Liard, JO	G	-	Grav	-

Obj: a) to provide, with high International Standards of precision, absolute gravity measurements in Canada to meet present and future requirements for datum control of the Canadian Gravity Standardization Net, as reference measurements for standards laboratories, as a contribution to international experiments in global gravity field studies and for measurement of temporal variations of the Earth's gravity field.
b) to maintain state-of-the-art expertise and capability in the measurement, analysis and interpretation of absolute gravity measurements.

6.4.2.01	Gravity and crustal motion data base	Hearty, DB	G	-	Grav	-

Obj: To provide data storage, retrieval and display services for gravity and crustal motion data in support of government research programs, the petroleum and mineral exploration industries, universities and the general public.

6.4.2.02	Gravity standards including the Canadian Gravity Standardization Net	McConnell, RK	G	-	Grav	-

Obj: To develop gravity reference and calibration standards to meet the needs of geophysicists and geodesists; to maintain, update and extend the Canadian Gravity Standardization Net (CGSN80); to advise, assist and collaborate with agencies outside Canada in the development of national and international gravity standards.

6.4.2.03	Mathematical methods and systems	Buck, RJ	G	-	Grav	-

Obj: To develop computer methods, techniques and systems required for the reduction, editing and analysis of gravity and related data.

6.4.3.06	Impact processes and evolution of the Earth's Crust	Grieve, R	G	-	Grav	-

Obj: To investigate meteorite impact processes on the terrestrial planets and their contribution to the evolution of the Earth's crust through studies of impact melting, natural and experimental shock deformation, geophysical parameters of circular structures and the time scale of impact events on earth.

6.4.3.07	Rock properties contribution to Nuclear Fuel Waste Management Program	Robertson, PB	G	-	Grav	-

Obj: To study the physical, rock-crack and fabric properties of rock and drill-core samples obtained from designated research areas as part of the concept assessment phase of the NFWM program.

6.4.3.14	Crustal genesis and evolution studies	Grieve, R	G	-	Grav	-

Obj: To utilize large-scale and digital geophysical, space-derived and other databases to address general problems in crustal genesis and evolution.

6.4.3.15	Gravitational field modelling, analysis and interpretation techniques	Nagy, D	G	-	Grav	-

Obj: To develop mathematical techniques and computer software for modelling, analysis and interpretation of the gravitational field from surface and airborne observations.

6.4.4.01	Management and coordination of Geophysical Activity	Gibb, RA	G	-	Grav	-

Obj: To manage and coordinate geophysical and related activities carried out at designated areas as part of the concept assessment phase of the Nuclear Fuel Waste Management Program.

6.4.4.02	Coordination of Geophysical Data Base	Gibb, RA	G	-	Grav	-

Obj: To coordinate the development and utilization of a data base for geophysical and related studies carried out as part of the concept assessment and site selection phases of the Nuclear Fuel Waste Management Program.

6.4.5.02	Coordination of all CESAR scientific results	Weber, JR	G	-	Grav	-

Obj: To coordinate CESAR scientific results and evaluate bathymetric and gravity results.

6.4.6.01	Provision of management and administrative support for the Gravity and Geodynamics Subdivision	Gibb, RA	G	-	Grav	-

Obj: To provide overall management and administrative support to the Gravity and Geodynamics Subdivision through the office of the Chief of the Subdivision.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
6.5.1.01	Geodynamic observatories and data base	Popelar, J.	G	-	G	-

Obj: To ensure availability, preservation and timely distribution of data on the earth's rotational dynamics and the stability of primary reference points for the Canadian landmass.

6.5.1.02	Data analysis and development of new techniques	Popelar, J	G	-	G	-

Obj: To assemble, evaluate and compare results of routine and experimental observations of the earth's rotation and polar motion to improve data reduction models, reference standards and observation techniques and to study their implications for geophysics, precise geodetic positioning and space navigation.

6.5.1.04	Mathematical methodology and applications for satellite global positioning and navigation	Kouba, J	G	-	G	-

Obj: Develop mathematical methods and software to facilitate world wide satellite positioning and navigation and optimize their applications in geophysics.

6.5.2.01	Relationship of tilt, strain and gravity variations to seismicity at Charlevoix, Quebec	Lambert, A	G	-	G	-

Obj: To measure and interpret tilt, strain and gravity changes as part of a multi-parameter study of the processes leading to earthquake rupture in the Charlevoix region.

6.5.2.05	Aquifer-tide studies for Nuclear Fuel Waste Management Program	Bower, DR	G	-	G	-

Obj: In cooperation with AECL staff, to interpret tidal and barometric variations in borehole piezometric measurements at selected sites in terms of hydrogeological, rock-mass, fracture and geophysical parameters.

6.5.2.07	Determination of regional and large scale deformations in Canada	Lambert, A	G	-	G	-

Obj: To introduce new measurement techniques (VLBI, GPS, Absolute Gravity) as they become available in addition to traditional geodetic methods to monitor, analyze, and interpret contemporary crustal deformation over broad areas. Prepare for monitoring deformations of the North American Plate by long baseline and gravimetric techniques with the purpose of understanding the impact of crustal deformations on local phenomena of a hazardous nature.

Mineral Resources Division

640402 (3571)	Certification of bedded and non-bedded mineral deposits	Findlay, DC	MR	EG	-	-

Obj: To act on behalf of the Director-General of the Geological Survey in the certification of mineral deposits as bedded or non-bedded for income tax purposes.

650056* (3571)	Geology of lead and zinc resources in Canada	Sangster, DF	MR	MD	-	Nfld NS NB Que Ont Yk BC Frank Kee Mack

Obj: To carry out comprehensive research on the geology of lead and zinc resources in order to: 1) support or provide geologically based estimates of Canada's mineral resources; 2) provide guidelines for their discovery; 3) provide advice to government for mineral policy and related matters.

NTS: 12 B,H,I,P; 11 C,G,J; 22 B,H; 48 B,C; 68 H; 95 D; 94 B,E; 105 B,L; 104 O; 85 B; 21 E; 31 C,E

680114 (3571)	Development and supervision of mineral deposits data bank	Garson, DF	MR	MD	MRIS	-

Obj: To develop files of data on mineral deposits and to supervise their operation in ways effective for the needs of the Geological Survey of Canada and, as far as it is practical, compatible with related files within the Department and with a National System for storage and retrieval of geological data. Two main types of files are involved:

1. documentary files of reports, maps and other published and unpublished information; and
2. computer processable files.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
690038 (3571)	Probability models for estimating mineral potential and for geoprocessing	Agterberg, FP	MR	EG	MAG	-

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 to design quantitative methods for the integration and processing of various types of geoscience data.

700059* (3571)	Geology of copper and molybdenum deposits in Canada – I	Kirkham, RV	MR	MD	MDG	BC NB NS Nfld Ont

Obj: To carry out comprehensive research on the geology of copper and molybdenum deposits in order to:
1. support or provide geologically based estimates of Canada's mineral resources;
2. provide guidelines for their discovery; and
3. provide advice to government for mineral policy and related matters.

NTS: 11; 12; 42; 104

740098* (3571)	Metallogeny of the northern Canadian Cordillera	Dawson, KM	MR	MD	RMS	BC Yk

Obj: To integrate present mineral commodity and regional geological studies in order to:
1. examine the large scale geological controls and distribution of known mineral deposits;
2. assist in planning of future geological mapping; and
3. assess the area with regard to its mineral potential.

NTS: 92 H,J,O; 82 K,M; 103 G; 104 N,O,P; 105 A,B,F,G; 95 D,E,L; 114 P

750010* (3571)	Geology of Uranium and Thorium Resources in Canada	Ruzicka, V	MR	MD	RMRA	Ont Sask Kee Mack Que NS Nfld NB

Obj: To carry out comprehensive research on the geology of uranium and thorium deposits in order to:
1. support or provide geologically based estimates of Canada's uranium and thorium resources;
2. provide guidelines for their discovery; and
3. provide advice to government for nuclear energy policy and related matters.

NTS: 41 I,J; 52 A,H; 64 E,L; 74 G,H,I; 65; 75; 21; 22 M; 23 D; 12; 20 P

750069* (3571)	Geology of uranium resources of Canada 3	Bell, RT	MR	MD	RMRA	BC Yk Mack Alta Sask Man Que Nfld

Obj: To carry out comprehensive research on the geology of uranium deposits in sedimentary basins in Canada west of the Canadian Shield in order to:
1. provide or support geologically based estimates of Canada's uranium resources;
2. provide guidelines for discovery of deposits; and
3. provide advice to government for uranium policy and related matters.

NTS: 23; 24; 105; 115; 82 E

750094 (3571)	Development of computer-based statistical techniques applicable to regional geological and mineral deposit data	Chung, CF	MR	EG	MAG	-

Obj: Develop and apply statistical techniques as an input to methods for regional resource evaluation of geological data and mineral deposit data.

750098* (3571)	Metallogeny of the south-western part of the Canadian Shield	Franklin, JM	MR	MD	MDG	Man Sask Que Ont Frank Kee Mack

Obj: To provide a regional synthesis of the geology of a large part of the Canadian Shield south of Lat. 60° and west of Long. 25°, in order to determine the origin, setting and distribution of mineral deposits as an aid to prospecting and to the economic development of the region.

NTS: 31; 32; 41; 42; 43; 52; 53; 54; 62; 63; 64; 73; 74

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
750110 (3571)	Federal-Provincial and Federal Territorial mineral evaluation liaison and co-ordination	Findlay, DC	MR	EG	-	-

Obj: To provide technical advice and liaison on the Geological Survey's involvement in the design and monitoring of joint federal-provincial actions in mineral resource evaluation and development; to participate, as required in the co-ordination, implementation, and management of such projects; same for mineral evaluation projects in northern Territories (Yukon, NWT) conducted by GSC in cooperation with other agencies (eg. DINA).

760014 (3571)	Geology of uranium resources of Canada-4	Dunsmore, HE	MR	EG	MDG	NS NB Nfld Que

Obj: Comprehensive research on the geology of uranium deposits in order to:
1. support or provide geologically based estimates of Canada's uranium resources;
2. provide guidelines for their discovery;
3. provide advice to government for uranium policy and related matters.

NTS: 11; 12; 21

760064 (3571)	Geology of Mineral Resources in the Oceans	Gross, GA	MR	-	SP	-

Obj: 1. To provide a base of geological information for identifying and determining the kinds, distribution and possible extent of ocean mineral resources, and for evaluating their significance to Canada.
2. To provide a direct and independent national competence for evaluating these resources and for appraising implications of their development with respect to Canadian mineral policy and the use and marketing of Canadian mineral products.

770024* (3571)	Geology of uranium resources of Canada-V	Gandhi, SS	MR	MD	RMRA	BC Mack NS Nfld

Obj: To carry out comprehensive research on the geology of uranium deposits in order to:
1. support or provide geologically based estimates of Canada's uranium resources;
2. provide guidelines for their discovery;
3. provide advice to government for uranium policy and related matters.

NTS: 75 E,F,J,K,L,N,O,P; 76; 85; 86 K; 21 H; 13 H,J,K,L,O

770025* (3571)	Regional Geochemistry – Yukon	Goodfellow, WD	MR	MD	MDG	Yk

Obj: 1. To determine through regional geochemical surveys the mineral potential of the Yukon.
2. To assess through regional detailed studies the use of various geochemical sample media as a fundamental step towards the development of geochemical methodology appropriate to the project area.
3. To provide a data base for the compilation of a National Geochemical Reconnaissance Map as a contribution to the mineral potential inventory of the nation.

NTS: 105 B,C,D,E; 115 A,H,I,J,K,N,O

770055* (3571)	Metallogeny of the northwestern part of the Canadian Shield	Roscoe, SM	MR	MD	RMS	Ont Que Mack Kee Man Sask

Obj: To provide a metallogenic basis for the evaluation of the mineral resources of the northwestern part of the Canadian Shield.

NTS: 46; 55; 56; 64; 65; 66; 74; 75; 76; 85; 86

770063* (3571)	Geology of Lead and Zinc resources of Canada – II	Lydon, JW	MR	MD	MDG	Yk Mack Que Man Frank Nfld

Obj: 1. Support or provide geologically based estimates of Canada's resources of these commodities.
2. Provide guidelines for their discovery.
3. Provide advice to government for mineral policy and related matters.

770071* (3571)	Geology of copper and molybdenum resources of Canada	Sinclair, WD	MR	MD	RMS	NS NB Frank Que Ont Kee Yk BC Mack

Obj: The project is one of comprehensive research on the geology of copper and molybdenum deposits in order to:
1. support or provide geologically based estimates of Canada's resources of these commodities;
2. provide guidelines for their discovery; and
3. provide advice to government for mineral policy and related matters.

NTS: 104 O; 105 A,B,C,D,F,M,O; 20 P; 21 G,J; 41 I; 42 C; 85 H,I,J; 115 N,O

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
780032 (3571)	Lead isotopic studies on genesis of ore deposits	Thorpe, RI	MR	MD	MDG	-

Obj: 1. To do lead isotopic studies of ore deposits in order to improve our understanding of the age and genesis of these deposits.
2. To derive a lead isotope model that will be useful in refining genetic models for many types of ore deposits.
3. To coordinate the obtaining of lead isotope analyses for the members of the Mineral Deposits Geology Section and the assignment of priorities for such analyses.
4. To aid members of the section in interpretation of analyses that have been carried out for other projects.

800023 (3571)	Special assignments on eastern and northern Canada	Poole, WH	MR	EG	SP	Que NB NS Nfld

Obj: To contribute to the mineral resource data base and the evaluation of regional resources.

810024* (3571)	Metallogeny of the Baker Lake-Thelon region, N.W.T.	Miller, AR	MR	MD	RMS	Kee

Obj: To determine the relationship of uranium and other mineralization to intrusive and extrusive igneous activity, metamorphism and sedimentary processes in the Archean basement and overlying Aphebian and Helikian rocks in the Baker Lake-Thelon region.

NTS: 66 A; 56 D,E,J; 65 I,J; 55 M

810025 (3571)	Organization and preparation of mineral resources component of Economic Geology Series Volume 1 – 6th Edition	Thorpe, RI	MR	MD	MDG	-

Obj: To produce descriptive-interpretative accounts of the mineral deposits of Canada, integrated as appropriate with the regional geological accounts, and to produce summaries of deposit types, metallogenic syntheses and inter-regional comparisons of the character and distribution of mineral resources.

820051* (3571)	Metallogeny of marine environments, including active spreading ridges	Franklin, JM	MR	MD	RMS	Pacific Offshore

Obj: 1. In collaboration with other scientists to investigate and document seafloor sulphide and other metalliferous occurrences in Canadian waters, with particular emphasis on the Juan de Fuca-Explorer-Dellwood-Tuzo Wilson ridges and adjacent seafloors.
2. To conduct research on hydrothermal systems and products in seafloor environments and to assist in the design, coordination and implementation of Canadian research programs in these areas.

NTS: 91; 100; 101; 102

820052* (3571)	Metallogenic processes in sedimentary-diagenetic environments	Dunsmore, HE	MR	MD	MDG	Sask Man Alta BC

Obj: To understand how various commodities of economic interest are, or were, concentrated by sedimentary-diagenetic processes, particularly those operating in evaporitic environments. An understanding of these processes is necessary for development of metallogenic models applicable to mineral exploration and resources evaluation.

NTS: 53; 62; 72; 73; 82; 83

830038 (3571)	Geomathematical applications the integration of geoscience in map data	Bonham-Carter, GF	MR	EG	MAG	Yk

Obj: To integrate diverse types of map information: geological maps (incl. structure and stratigraphy), geophysical maps (aeromag., gravity, radiometric surveys), geochemical surveys (stream and lake surveys), satellite imagery (Landsat MSS digital data), mineral occurrences (from CANMINDEX and elsewhere). To develop and refine methods for quantitatively comparing and integrating map data from diverse sources.

NTS: 105 I

840003* (3571)	Regional mineral resource assessment, northern Canada – II	Jefferson, CW	MR	MD	RMRA	Yk Mack Kee Frank BC Alta Que

Obj: To conduct non-renewable resource assessment studies based on regional metallogeny, for land use planning activities including proposed national parks and other conservation areas. To contribute to descriptive and genetic models of mineral occurrences and their application to exploration and resource evaluation.

NTS: 23; 24; 46; 56; 77; 78; 82; 87; 88; 94; 95; 96; 97; 98; 105; 106

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840012* (3571)	Regional mineral resource assessment – northern Canada – I	Scoates, RFJ	MR	MD	RMRA	Frank Mack Kee

Obj: To conduct non-renewable resource assessment studies based on regional metallogeny for land use planning activities including proposed national parks and other conservation areas.

NTS: 46 (W½) 77; 78; 87; 88; 95; 96; 97; 98

840018* (3571)	Comparative Regional Metallogeny	Poulsen, KH	MR	MD	RMS	Ont Man Sask NS

Obj: To determine the relationships between mineralization and the tectonic history of the host rocks in various tectonostratigraphic domains; to contribute to descriptive and genetic models of mineralization and their application to exploration and resource evaluation with particular emphasis o the central Canadian Shield.

NTS: 11; 42; 52; 62; 63; 64; 73; 74

840050* (3571)	Metallogeny of Ultramafic and Mafic Rocks	Eckstrand, OR	MR	MD	MDG	Ont Que Man Sask Mack NB

Obj:
1. To increase the understanding of the occurrence and origin of mineral deposits associated with ultramafic and mafic rocks in Canada.
2. To provide geological knowledge applicable in the exploration, development, exploitation and appraisal of resources associated with such rocks including nickel, copper, platinum group elements, cobalt, chromium, vanadium, titanium and asbestos.

NTS: 42 A; 52 E,L,H; 23 J; 63 K,O; 64 C; 74 A; 75; 76; 21 B,G

840051* (3571)	Geological Evaluation and Remote Sensing (GEARS)	Rencz, AN	MR	EG	MAG	Ont Yk Que NS NB

Obj:
1. To initiate and develop remote sensing applications to investigate geological phenomenon;
2. To develop programs/projects in image analysis; and
3. To assist in cooperative projects with GSC and non GSC staff in applications of remote sensing to existing and planned projects.

NTS: 31 C,F,J,K; 105 I; 11 D,E,F; 21 J,L

840059* (3571)	Metallogeny of Eastern Canada II	Birkett, TC	MR	MD	RMS	Nfld NS NB Que

Obj:
1. To determine the relationships between mineral deposits and their geological environments in the Canadian Appalachian, eastern Grenville and Superior and southeastern Churchill Province.
2. To contribute to descriptive and genetic models of mineral occurrences and deposits and their application to exploration and resource evaluation in these regions.

850009* (3571)	Metallogeny of Eastern Canada I	Robert, F	MR	MD	RMS	Que Ont

Obj:
1. To determine relationships between mineral deposits and their geological environments in Eastern Canada, with emphasis on southeastern Superior Province and on southwestern Grenville Province.
2. To contribute to descriptive and genetic models of mineral occurrences and to their application to exploration and resource evaluation in these regions.

NTS: 31, 32

850012 (3571)	Supervision, Ottawa-Carleton U GSC Joint Stable Isotope Laboratory	Taylor, BE	MR	MD	MDG	-

Obj: To provide appropriate expertise and leadership in the supervision of the Joint Stable Isotope Laboratory, under the terms of reference provided by the GSC-OCCGS (Ottawa-Carleton Centre for Geoscience Studies) Memorandum of Understanding and directives of the Joint Facility Management Committee.

850013 (3571)	Light Stable Isotope Geochemistry of Rock and Ore-Forming Processes	Taylor, BE	MR	MD	MDG	Ont

Obj:
1. To provide a better understanding of processes which have formed ore deposits and the earth's crust in Canada.
2. To develop models of ore-forming processes and exploration techniques based on model predicted characteristics.

NTS: 52

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850052* (3571)	Metallogeny of gold in the continental crust	Poulsen, HK	MR	MD	RMS	NS Que Ont Man

Obj: 1. To increase understanding of the occurrence and genesis of hydrothermal gold deposits in Canada.
2. To work toward definition of the geological processes and environments important in the formation of gold deposits; to develop criteria for (a) exploration, and (b) assessment of gold potential.
3. In the short term to provide descriptions of major types of Canadian lode gold deposits as contributions to the DNAG volume on "Mineral Deposits of Canada".

NTS: 11 D,E,F; 42 A,E; 32 C,D,E; 63 J,K

860008* (3571)	Metallogeny of Nova Scotia	Sangster, AL	MR	MD	RMS	NS

Obj: 1. To determine the relationship between mineral deposits and their geological environments in Nova Scotia and adjacent shelf portions of the Canadian Appalachian Province.
2. To contribute to the descriptive data base and to develop genetic models of mineral deposits and occurrences as pertains to mineral exploration and resource evaluations in this area.

NTS: 11; 20 O,P; 21 A,B,H

860009* (3571)	Metallogeny of New Brunswick	Watson, GP	MR	MD	RMS	NB Que

Obj: 1. To determine the relationships between mineral deposits and their geologic environments in the New Brunswick and adjacent shelf portions of the Canadian Appalachian Provinces.
2. To contribute to descriptive and genetic models of mineral occurrences and deposits and their application to exploration and resource evaluation in this region.

NTS: 11 E; 21

860015* (3571)	Biogeochemical methodology	Dunn, CE	MR	EG	-	Ont Que BC Sask

Obj: 1. Develop, test and publish biogeochemical methodology appropriate to exploration.
2. Study biogeochemical processes.
3. Create a biogeochemical data base.

NTS: 32 E; 92 H; 73 P; 74 A

860018* (3571)	Geological research on sediment-hosted base metal deposits	Sangster, DF	MR	MD	MDG	NS Que Ont Yk BC Frank Mack Kee

Obj: To conduct research on base metal deposits hosted in sedimentary rocks in order to:
1. increase the understanding of the geological distribution and origin of these deposits;
2. improve our knowledge of the definitive deposit-model characteristics of these deposits;
3. improve guidelines for resource assessment and exploration for these deposits.

NTS: 11 C; 21 E; 31 C,E; 94 B,F; 105 B; 85 B

860019* (3571)	Borehole geophysics calibration and standardization	Killeen, PG	MR	EG	BG	Ont NS Alta

Obj: To obtain quantitative data on the physical properties of rocks using borehole geophysical measurements by developing calibration facilities, improved logging equipment, and methods of calibrating and standardizing the measurements.

NTS: 31 L; 11 D; 82 O

860033 (3571)	Geochemical methodologies in glaciated terrains	Coker, WB	MR	EG	GMR	Man Ont

Obj: 1. To conduct research and development to test and formulate geochemical exploration methodolgoies for utilization in glaciated terrain.
2. To investigate Quaternary stratigraphy, utilizing the geochemical characteristics of the overburden.

380077 (3572)	Analysis of rocks and minerals by established methods	Lachance, GR	MR	MC	AC	-

Obj: To provide the scientific staff of the Branch, and others on occasion, with comprehensive compositional analyses using the established methods of the Section, in support of Branch scientific projects.

400006* (3572)	Preparation of collections of Canadian rocks and minerals for distribution to the public	Larose, JM	MR	MC	Min	BC Alta Sask Man Que Ont

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.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
550101* (3572)	Reference collections of minerals, rocks and meteorites	Herd, RK	MR	MC	Min	-

Obj: To develop, foster and curate reference collections of minerals, rocks, and meteorites in support of Branch activities and in the national interest.

580175 (3572)	Analytical services and development in geochemistry	Hall, GEM	MR	MC	C	-

Obj: To provide for the present and future analytical service requirements of the Geological Survey.

620308 (3572)	Electron beam microanalysis	Plant, AG	MR	MC	Min	-

Obj: To conduct studies of geological materials using techniques of electron probe microanalysis and scanning electron microscopy, in support of Branch projects.

640048 (3572)	Study of mineral collecting areas of interest to collectors and tourists	Stenson, AP	MR	MC	Min	Que Ont Man

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

680023* (3572)	X-ray diffraction analyses and mineralogical studies	Harris, DC	MR	MC	Min	Ont BC

Obj: To provide X-ray diffraction analyses and mineralogical studies in support of Branch projects.

NTS: 42 D

690090 (3572)	Development of methods for the analysis of geological materials	Lachance, GR	MR	MC	Min	-

Obj:
1. To develop new methods in order to: i) meet demands when analyses are requested on materials for which the Section does not have prescribed methods; ii) meet demands when analyses are requested for elements or constituents for which the Section does not have prescribed methods; iii) extend the range of concentration and/or improve accuracy and/or improve productivity.
2. The objectives outlined in a) may be oriented towards: i) the analysis of a specific need such as the submission of a suite of unusual samples; ii) providing a detailed procedure that is made available to the analytical services component of the Section.

770054 (3572)	Sample preparation and mineral separating	Delabio, RN	MR	MC	Min	-

Obj: To provide sample preparation and mineral-separating services in support of Branch projects.

830041* (3572)	Research and Development on the Analytical Methodology of Geological Materials	Gregoire, DC	MR	MC	C	Pacific Offshore

Obj: To provide for the analytical chemistry research and development requirements consistent with the aims of the GSC.

720071* (3573)	Airborne Gamma-Ray Spectrometry (Experimental Surveys)	Holman, PB	MR	EGP	RG	Man NB Ont Que Sask Nfld NS

Obj:
1. Provide acceptable standards for the acquisition and compilation of airborne gamma-ray spectrometic data.
2. Demonstration of suitability of airborne gamma-ray spectrometry methods in various parts of Canada by:
   - conducting orientation surveys in advance of U.R.P. contract surveys.
   - conducting reconnaissance surveys maps.
   - conducting detailed follow-up surveys of areas of interest located by URP program.
3. Have available the technology and personnel to respond to nuclear accidents where aircraft monitoring is required.

NTS: 31 E,F,L,M; 21 G,H,J,O; 11 E; 64 H; 74 I,J,K; 2 D

720084* (3573)	Gamma-Ray Spectrometry (Technique Development)	Grasty, RL	MR	EGP	RG	Ont

Obj: To develop improved methods of airborne gamma-ray spectrometry data collection, analysis and presentation.

NTS: 31 C

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
740091* (3573)	Borehole Geophysics (Electrical and Magnetic Techniques)	Dyck, AV	MR	EGP	BG	BC Ont Que NB Man Sask Nfld

CURRENT INFORMATION NOT AVAILABLE

Obj: To continue the development of borehole mining geophysics technology as a means of improving the efficiency and effectiveness of mineral exploration practices, geophysical techniques applied to engineering and geological mapping.

NTS: 41 I,J; 52 B; 31 F,K; 74 H,I; 64 C,H,L; 62 I; 32 D,E, 12 A

780047 (3573)	Computer Methods and [illegible]	Carson, JM	MR	EGP	RG	Sask Ont NB Alta

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. To develop computer methods for compilation of radiometric data.
2. Develop data base for airborne, ground, laboratory and borehole gamma ray spectrometric data.
3. To standardize and coordinate the calibration of radiometric systems.

NTS: 21 G; 31 G; 73 B; 82 O,P

790034* (3573)	Shallow Seismic	Gagne, RM	MR	EGP	TG	Ont Que BC Alta

CURRENT INFORMATION NOT AVAILABLE

Obj: To map the density structure of surficial deposits by engineering seismic methods for geological mapping and site analyses.

NTS: 31 F,G,H,I,K; 82 E; 84 A; 93 G; 42 A; 91 G; 92 G

800018* (3573)	High Resolution Seismic Equipment Development	Pullan, SE	MR	EGP	TG	Ont Que Man Alta BC Sask Yk NS

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. To develop new techniques for use with the engineering seismograph.
2. To improve the reflection seismic resolution of shallow seismographs and test these improvements at various sites in Canada.

NTS: 40 I,P; 30 M; 84 A; 93 G; 73 B; 83 G; 31 G; 11 E; 82 L

810003* (3573)	Evaluation of Two Deep Sounding E.M. Systems	Sinha, AK	MR	EGP	TG	NS Nfld Que Ont Sask Man Mack

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. To evaluate and demonstrate the effectiveness of two deep sounding electromagnetic (E.M.) systems, Maxi-Probe and Geonics EM-37, for geological mapping (e.g. permafrost) and mineral exploration (e.g. base metals and uranium) purposes.
2. To compare these two systems with other inductive sounding/mapping systems.
3. To develop techniques for the interpretation of field data from these two systems and to establish new techniques for electrical exploration at large depths.

NTS: 31 D,G; 41 A; 40 P; 107 C; 64 C; 71 I,N,O; 30 M; 21 A; 42 A; 32 F; 11 F

810008 (3573)	Nuclear and Analytical Instrumentation	Bristow, Q	MR	EGP	IRD	Ont

CURRENT INFORMATION NOT AVAILABLE

Obj: Adaptation of advanced technology, and development of new technology (both in-house and under contract) for improved acquisition of conventional geophysical and geochemical data and for the measurement of other new parameters which are not at present generally measured. Publication of results and/or licencing of products for the rapid and effective transfer of technology to industry.

NTS: 31 C,F,K; 40 P

810009 (3573)	Remote Sensing Applications	Slaney, VR	MR	EGP	RG	-

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. To maintain up to date a Landsat imagery file for the use of the GSC staff and to be in a position to advise geologists adequately on the potentials and limitations of Landsat imagery in the solution of specific problems.
2. To develop and to demonstrate new methods or to adapt existing methods in relation with the task of integrating imagery (satellite and airborne) with geochemical, geophysical and geological data for the purpose of geological mapping and/or mineral exploration.
3. To evaluate geological applications of Synthetic Aperture Radar and to provide the Interdepartmental Committee on Space with requirements for RADARSAT project.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810043* (3573)	Pore structure in crystalline rocks	Katsube, TJ	MR	EGP	-	Man Ont

Obj: To develop methods to determine pore structure and radionuclide isolation capacity of various types of crystalline rocks. To apply these methods on rock samples from Pinawa, Chalk River, Atikokan and other Fuel Waste Research areas.

NTS: 52 B,L; 41 J; 31 K

820021* (3573)	Borehole Geophysics Applications to Coal	Mwenifumbo, CJ	MR	EGP	BG	Ont NS Alta Nfld Man

Obj: To develop borehole methods for the detection and evaluation of coal.

NTS: 42 A; 41 J,P; 43 K; 82 I,O; 31 F-G

820023 (3573)	Operation CESAR	Overton, A	MR	EGP	TG	Arctic Offshore

Obj: To participate in a multidisciplinary Canadian Arctic geoscience expendition to investigation the nature and origin of the Lomonosov Ridge, a major subsea mountain range in the Polar Basin.

840026* (3573)	Regional Interpretation of Gamma Ray Spectrometry	Charbonneau, BW	MR	EGP	RG	Kee Mack

Obj: 1. To prepare compilations of airborne gamma ray spectrometric data at scales of 1:1,000,000 and 1:5,000,000.
2. To relate and integrate radiometric compilations to other geoscientific data sets, and interpret the results in collaboration with mapping geologists, economic geologists, et al.

NTS: 65 B,C; 75 D,E

840028 (3573)	Applications of Gamma Ray Spectrometry	Ford, KL	MR	EGP	RGG	Ont NB NS

Obj: To maximize the usefulness of airborne gamma ray spectrometric surveys as:
1. an aid to geological mapping; and
2. a multi-element exploration technique.

NTS: 31 C,L; 21 G,J; 11 D

840029* (3573)	Beaufort Sea Permafrost Geotechnics	Hunter, JA	MR	EGP	TG	Mack

Obj: To develop and demonstrate a geophysical capability for evaluation of the nature and extent of permafrost in the Beaufort Sea and other offshore areas.

NTS: 107

840030* (3573)	Interpretation of Standard Geophysical Logs	Katsube, TJ	MR	EGP	-	Ont Man

CANCELLED

Obj: 1. To develop and apply methods of interpretation to standard geophysical logs acquired as part of the Nuclear Fuel Waste Management Program.
2. To determine the physical property distribution in rock masses over distances of kilometres.
3. To determine rates of fluid and ion migration through fractures and rock matrix.

NTS: 31 K; 41 J; 52 B,L; 62 I

840031* (3573)	Borehole Geophysics/Applications Development	Killeen, PG	MR	EGP	BG	Ont Que Man NB NS

Obj: 1. To develop and demonstrate the application of integrated borehole geophysical measurements in mineral exploration and mining;
2. To determine methods to quantify these measurements, and to proceed with the requisite experimental development.

NTS: 41 J; 42 A; 52 L; 63 F; 20 O; 21 O, 11 E

840055 (3573)	Rock Properties Laboratory	Stephens, LE	MR	EGP	BG	-

Obj: To establish a rock properties laboratory:
1. To provide physical rock property measurements in support of other projects (e.g. Borehole Logging).
2. To investigate physical rock properties and their interrelationships.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840062* (3573)	Geophysical Studies – Nova Scotia Mineral Development Agreement	Richardson, KA	MR	EGP	TG	NS

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. Determine geologic structure in Carboniferous rocks of Cumberland Basin, offshore Port Hood and Springhill areas.
2. Produce airborne geophysical maps to aid in geological mapping and identification of favourable areas for mineral deposits.
3. Explain geological and potential economic significance of selected airborne gamma ray anomalies.
4. Determine most suitable surface and borehole geophysical methods for detection of sandstone lead deposits (e.g. Yava Mine) and coal beds.

NTS: 11 D,E,F,K; 21 G,H

840063* (3573)	Ice Island Seismic [illegible]	Overton, A	MR	EGP	TG	Arctic Offshore

CURRENT INFORMATION NOT AVAILABLE

Obj: To complete seismic reflection experiments on the Ice Island, to establish optimum parameters for recording sedimentary and basement reflections, with occasional tests for Moho reflections.

850053* (3573)	Geophysical Studies – New Brunswick Mineral Development Agreement	Richardson, KA	MR	EGP	-	NB

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. Produce airborne geophysical maps to aid in geological mapping and identification of favourable areas for mineral deposits.
2. Apply airborne geophysics to the investigation of the Miramichi earthquake area.

NTS: 21 G,J

850054* (3573)	Geophysical Studies – Newfoundland Mineral Development Agreement	Richardson, KA	MR	EGP	-	Nfld

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. To produce airborne gamma ray spectrometric and VLF-EM maps of selected parts of Newfoundland.
2. Determine optimum borehole geophysical methods for detection of orebodies of the types such as Newfoundland zinc, Rambler and Buchans.

NTS: 1 M: 2 D; 11O; 12 A,B,G,H,I; 14 D

850058 (3573)	Airborne Resistivity Mapping	Palacky, GJ	MR	EGP	SP	Man Ont Mack Kee

CURRENT INFORMATION NOT AVAILABLE

Obj: Establishing the use of systematic airborne resistivity surveys in Canada for mineral resource inventory, determination of depth, thickness and resistivity of glacial overburden, permafrost and sedimentary cover (not thicker than 200 m) and shallow-water bathymetry.

740081* (3574)	Environmental Geochemistry	Jonasson, IR	MR	EGC	ER	BC

Obj: 1. Understand the nature of physical and chemical processes which influence the dispersion of elements in the surficial environment.
2. Coordinate subdivision activities relating to environmental matters.
3. Provide appropriate surficial chemical and lithochemical support to Cordilleran sedimentary basin analysis studies.
4. Develop research program in geochemistry of geothermal fluids, both continental and submarine; and hence determine modes of genesis of epithermal mineralization on land and under sea.

NTS: 74 H,I; 64 E,L; 92 E,F; 94 F,G; 95 E,F; 106 F; 103 B,G;

740107* (3574)	Trace elements in sulphides	Jonasson, IR	MR	EGC	MDG	Ont BC Yk Mack Que

Obj: 1. To determine the typical contents and ranges of trace elements, (plus their stable isotopes) including metals, metalloids and non-metals in ores, ore minerals and accessory minerals.
2. To assess the value of such data with regard to classification of ores, estimates of ore reserves of rare metals, definition of geochemical and metallogenic provinces, establishment of environment baseline levels.
3. To provide a systematic geochemical inventory for regional surveys carried out on land and in offshore areas of Canada's economic zone, west coast.

NTS: 42 A; 32 D; 31 A,B,C,F,M,P; 94 F,G; 104 N; 101 A,B

750039 (3574)	Automated Geochemical Cartographic Development	Ellwood, DJ	MR	EGC	RGS	-

Obj: To develop new methods and improve established methods of mapping geochemical data by computer, to develop computer systems which use these methods, and to produce geochemical maps in various forms and at various scales.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
750051* (3574)	National geochemical	Hornbrook, EHW	MR	EGC	-	-

Obj: 1. To provide for governments and industry nationally consistent, systematic, multi-element, reconnaissance data to indicate areas of mineral commodity potential for exploration and resource appraisal purposes and to provide information on the natural abundance of elements in the environment.
2. To investigate geochemical variability in lake surveys in various terrains.

760047 (3574)	Regional geochemistry-Northern Canadian Shield	Maurice, Y	MR	EGC	GMR	Mack Kee Frank Sask

Obj: To determine the nature and factors affecting the distribution of trace elements within bedrock, overburden and stream and lake waters and sediments, etc. in order to:
1. evaluate the effectiveness of the NGR program (project 750051) and improve the operating techniques and specifications;
2. provide methodology for interpreting and following up NGR reconnaissance results;
3. assess the mineral potential of various regions and rock units with emphasis on granitoid rocks.

NTS: 76 H,I; 75 E,F-K; 74 H; 46 N,O,P; 47 A,B,E,F

780015* (3574)	Disequilibrium in the uranium series	Dyck, W	MR	EGC	GMR	Sask Ont BC

Obj: To determine the usefulness of disequilibrium in the U series in predicting the existence of U mineralization.

NTS: 31 F,G; 64 L; 74 I; 92; 102

780024* (3574)	Analytical control and standardization	Lynch, JJ	MR	EGC	RGS	Ont Que NB

Obj: 1. To obtain sample preparation and a variety of analytical services from commercial sources under contract for subdivision and RGR.
2. To provide analytical methodology, the use of which will permit the acquisition of accurate, precise and regionally compatible analytical data for the subdivision and RGR surveys under Federal, Provincial, and MDA jurisdiction.
3. To provide various types of international geochemical reference samples and to provide certified values for a large number of elements for these samples.

790002 (3574)	Geochemical data processing	Lund, NG	MR	EGC	SDS	-

Obj: 1. To manage in digital form, all geochemical data generated for the subdivision.
2. To improve data management support for the subdivision.
3. To produce open file material for Federal RGR and provincial open file releases of geochemical data.
4. To provide for the public information concerning all RGR surveys since 1975.
5. To provide special data processing requirements for division staff.

790003* (3574)	Applied Geochemistry for the Cordillera	Ballantyne, SB	MR	EGC	GMR	BC Yk

Obj: 1. To develop and test geochemical exploration methods for the discovery of concealed ore deposits in a variety of geological and surficial environments in the southern Cordillera.
2. To assess the effectiveness of geochemical reconnaissance surveys in the planning of exploration programs and in appraising the resource potential of areas.

NTS: 104 B,M,N,O,P,I; 94 F,K,L; 105 B,C,D-F,I,M; 92 O,P; 106 D; 115 P

790004 (3574)	Geochemical Resource Evaluation Studies	Garrett, RG	MR	EGC	GMR	-

Obj: To develop, test and publish methodologies for evaluating data and integrating them with other geoscience data for the purpose of resource evaluation and interpretation. To assist other members of the subdivision in selecting appropriate methods of data analysis.

790033* (3574)	Geochemistry of Mineral Occurrences and their Host Rocks in the Northern Cordillera	Goodfellow, WD	MR	EGC	MDG	Yk Mack

Obj: Through geochemical studies, to assist in determining:
1. the origin of selected mineral occurrences;
2. criteria which can be used in the exploration for new and possibly deeply buried mineral deposits;
3. geochemical methodology for the identification and differentiation of stratigraphic units, thereby assisting in stratigraphic correlations; and
4. the evolution of marine environment during the Phanerozoic.

NTS: 105 F,I,N,O; 115 H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
800030* (3574)	Isotopic Geochemistry, Precambrian Mineralized Basins	Cameron, EM	MR	EGC	-	Mack Ont Que

Obj: 1. Provide data on the distributions of certain isotopic ratios within mineralized Precambrian basins.
2. Utilize these data to interpret the mineralizing processes.
3. Develop methods of geochemical exploration for mineral deposits in these basins based on the findings of (a) and (b).

NTS: 42 C; 52 A; 41 I,J,K,P; 86

830050 (3574)	Geochemical exploration technology in ultrabasic complexes	Maurice, YT	MR	EGC	GMR	Ont Que

Obj: 1. To determine the favourability of ultrabasic complexes of various types throughout Canada to host Cu-Ni sulphides, platinum-group elements, chromite, and gold and silver deposits.
2. To develop and refine geochemical exploration methods for these metals in different environments.
3. To improve on the existing data base of platinum-group elements and other metals in various types of basic and ultrabasic rocks.

NTS: 21 L; 52 H

830058* (3574)	Groundwater Geochemistry in Mineral and Hydrocarbon Exploration	Boyle, DR	MR	EGC	GMR	NS Ont Man

Obj: 1. Development of methods of exploration for concealed mineral and hydrocarbon deposits using groundwaters.
2. To set up a quality controlled data base on groundwater chemistry to meet the necessary requirements of effective interpretation in mineral exploration and environmental studies.
3. Studies of geochemical parameters affecting groundwater chemistry.
4. Investigate the role of groundwater geochemistry in the formation of infiltration type mineral deposits and determine guidelines for exploration.
5. Provide input into environmental studies.
6. Provide input into the geothermal energy program.

840032* (3574)	Lithogeochemical Studies, Gaspé Peninsula	Maurice, YT	MR	EGC	GMR	Que

Obj: To provide systematic data on a regional scale, on the major and trace element geochemistry of bedrock units in the Gaspé Peninsula. This will permit reconstitution of the evolution of the sedimentary succession, evaluate the degree of weathering which has affected these rocks, and help in the interpretation of surficial (stream, soil, till) geochemical data. All this information will ultimately lead to a better understanding of the distribution and concentration of economic minerals in the region.

NTS: 22 A,B,G,H

840052* (3574)	Heavy Mineral Studies, Eastern Townships	Maurice, YT	MR	EGC	GMR	Que

Obj: To evaluate the favourability for the occurrence of economic deposits of Au, Sn, W, Ba, Cr, and platinum group elements on the basis of the dispersion of heavy minerals in streams.

NTS: Pts 21 E,L; 31 H

840053* (3574)	Heavy Mineral Studies, Gaspé	Maurice, YT	MR	EGC	GMR	Que

Obj: To evaluate the favourability for the occurrence of economic deposits of Au, Sn, W, Ba, Ta, Nb and other elements on the basis of the dispersion of heavy minerals in streams.

NTS: Pts 22 A,B,G,H

840058* (3574)	Follow-up Geochemistry	(Rogers, PJ)	MR	EGC	-	NS

Obj: To investigate and define the geochemical nature of regionally defined anomalies in the secondary environments of Nova Scotia and to develop new mineral exploration methodologies.

NTS: Pts 11 D,E,F,K,N

850047* (3574)	Mineral Development Agreements – Geochemistry	Friske, PWB	MR	EGC	RGC	Nfld NB Man Sask Yk Ont

Obj: To contract and/or conduct orientation, regional and follow-up geochemical surveys.
To publish high quality multi-element reconnaissance exploration data for exploration, appraisal and environmental use.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
570029* (3570)	Geology and appraisal of metalliferous sedimentary iron and manganese resources	Gross, GA	MR	-	-	Nfld Que NB Ont

Obj: To provide comprehensive geological knowledge, technology and expertise concerning iron, manganese and related metalliferous sedimentary deposits to determine their geological distribution, origin and potential abundance in Canada to facilitate exploration, land-use planning and policy formation, and to provide understanding to quality specifications of resources for industrial use in their national and international market context.

NTS: 23 J,B,G; 22 J; 21 G,H

620018 (3570)	Geological Survey of NTS 82 J W½ (Kananaskis Lakes, W½)	Leech, GB	MR	-	-	BC

Obj: To determine and interpret the stratigraphic structural and economic geological features of the region.

NTS: 82 J W½

Activity Management and Support

650023 (359)	Operation Bow-Athabasca	Price, RA	DGO	-	-	BC Alta

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 and other geological data that are required to evaluate the mineral potential of the area and to assist exploration of oil, gas, coal and other mineral deposits in this and adjacent areas.

NTS: 83 C,D, E½; 82 J,E½,N E½, O, W½

740084* (359)	Silurian-Ordovician macro-biostratigraphy of Anticosti Island, Quebec	Bolton, TE	DGO	-	SP	Que NB NS Kee Ont

Obj: To obtain data on the Silurian and Ordovician rocks of Anticosti Island, St. Lawrence platform and Maritime regions to provide:
1. precise descriptions for all appropriate stratigraphic units of their succession, thickness, lithology, facies change, faunal content;
2. descriptions of significant fauna for each stratigraphic unit; and
3. local and regional correlations consistent with the data.

NTS: 22 A,B,D,H; 12 E,F,L; 18; 11 F; 45; 46; 31 G,H; 32 A

750068 (359)	Interdepartmental & Intergovernmental Technical Services	Manistre, BE	DGO	-	-	-

Obj: To provide technical assistance to other government departments and agencies, particularly in connection with Geoscience Aid projects as required by the EMR/CIDA Memorandum of Understanding. To coordinate intergovernmental agreements, and attachments of visiting fellows under external auspices.

790042 (359)	Stratigraphy, structure and Tectonics; Innuitian Fold Belt, Ellesmere Island, N.W.T.	Okulitch, AV	DGO	-	SP	Frank

Obj: To map and describe structures of the southernmost part of the fold belt, their evolution and the tectonic history of that part of the belt on Ellesmere Island.

NTS: 49 A,B,C

800033 (359)	Geology and Economic Minerals of Canada 6th Edition	Wheeler, JO	DGO	-	-	-

Obj: To coordinate the preparation of a new edition of Geology and Economic Minerals of Canada and related charts and thematic maps for publication by the end of 1988.

810048 (359)	Canada-Nova Scotia Cooperative Mineral Program 1981-84	Poole, WH	DGO	-	-	NS

Obj. To ensure that the Cooperative Mineral Program with Nova Scotia Department of Mines and Energy is properly designed and that the GSC component is properly managed and productive.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
820020 (359)	Federal Mineral Program in Newfoundland 1982-84	Poole, WH	DGO	-	-	Nfld

Obj: To ensure that the Federal Mineral Program in Newfoundland is properly designed and that the GSC component is properly managed and productive.

830051 (359)	Geological Atlas of Canada	Okulitch, AV	DGO	-	SP	BC Alta

Obj: To plan and organize the preparation of the Geological Atlas of Canada, which consists of a factual synthesis of the bedrock geology of Canada displayed in a series of 1:1 million scale maps accompanied by correlation charts, cross sections, interpretive maps or diagrams, etc., as appropriate.

NTS: Pts 82 H,L

830054 (359)	Gaspé-Lower St. Lawrence Geoscience Program	Maurice, YT	DGO	-	-	Que

Obj: 1. To coordinate the program of geoscientific studies under the Gaspé-Lower St. Lawrence initiative and to assist GSC Divisions in planning and delivery of the work, and to monitor progress.
2. To develop and maintain appropriate contacts outside of GSC; to advise GSC management about factors affecting the program; to prepare such reports and other information as may be required by the Department and Central Agencies.

NTS: 21 M,N,O; 22 A,B,C,G,H

840027 (359)	Technology Transfer	Collett, LS	DGO	-	-	-

Obj: To exploit geoscience technology for the benefit of the Canadian mineral and energy resource industry; also to provide advice on developing geoscience technology relevant to industry and other government agencies; and to communicate these developments and other aspects of geoscience technology in writing.

840041 (359)	Canada-Saskatchewan Mineral Development Agreement (ERDA)	Galley, AC	DGO	-	-	Sask

Obj: To coordinate ERDA supported, GSC geoscience investigations in Saskatchewan to ensure their timeliness, integration and completion.

840042 (359)	Canada-Manitoba Mineral Development Agreement (ERDA)	Galley, AC	DGO	-	-	Man

Obj: To coordinate ERDA supported, GSC geoscience investigations in Manitoba to ensure their timeliness, integration and completion.

840054 (359)	Asbestos Initiatives Program – Geoscience Surveys Eastern Townships, Quebec	Anderson, FD	DGO	-	-	Que

Obj: To coordinate GSC geoscience investigations in Quebec that are supported by the Asbestos Initiatives Program to ensure their timeliness, integration and completion.

NTS: Pts 21 E,L; 31 H

840060 (359)	Canada-Newfoundland Mineral Development Agreement (ERDA)	Poole, WH	DGO	-	-	Nfld

Obj: To coordinate ERDA-supported GSC geoscience investigations in Newfoundland to ensure their timeliness, integration and completion.

840064 (359)	Canada-Nova Scotia Mineral Development Agreement (ERDA)	Poole, WH	DGO	-	-	NS

Obj: To coordinate ERDA supported GSC geoscience investigations in Nova Scotia to ensure their timeliness, integration and completion.

840066 (359)	Canada-New Brunswick Mineral Development Agreement (ERDA)	Anderson, FD	DGO	-	-	NB

Obj: To coordinate ERDA supported GSC geoscience investigations in New Brunswick to ensure their timeliness, integration and completion.

850067* (359)	Southern Cordillera Lithoprobe Transect	Price, RA	DGO	-	-	BC Alta

Obj: To develop an improved understanding of the current state, origin, evolution and dynamics of the lithosphere, in the southeastern Canadian Cordillera.

NTS: 82

SCIENTIFIC PROJECTS

by

NUMERICAL ORDER

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
380077 (3572)	Analysis of rocks and minerals by established methods	Lachance, GR	MR	MC	AC	-

Obj: To provide the scientific staff of the Branch, and others on occasion, with comprehensive compositional analyses using the established methods of the Section, in support of Branch scientific projects.

400006* (3572)	Preparation of collections of Canadian rocks and minerals for distribution to the public	Larose, JM	MR	MC	Min	BC Alta Sask Man Que Ont

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.

500029 (3522) (3512) (3543)	Identification and biostratigraphic interpretation of referred fossils	Norford, BS	ISPG C AGC	P MG EPG	-	NS Nfld NB Yk Mack BC Alta Pacific Offshore

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.

NTS: 95 B,C; 12 D; 103 G; 82 E,K; 83 C; 93 I

550101* (3572)	Reference collections of minerals, rocks and meteorites	Herd, RK	MR	MC	Min	-

Obj: To develop, foster and curate reference collections of minerals, rocks, and meteorites in support of Branch activities and in the national interest.

570029* (3570)	Geology and appraisal of metalliferous sedimentary iron and manganese resources	Gross, GA	MR	-	-	Nfld Que NB Ont

Obj: To provide comprehensive geological knowledge, technology and expertise concerning iron, manganese and related metalliferous sedimentary deposits to determine their geological distribution, origin and potential abundance in Canada to facilitate exploration, land-use planning and policy formation, and to provide understanding to quality specifications of resources for industrial use in their national and international market context.

NTS: 23 J,B,G; 22 J; 21 G,H

570148 (3551)	Radiocarbon dating program	Blake, W Jr	TS	-	A	-

Obj: To plan and co-ordinate the radiocarbon dating program of the Geological Survey.

580175 (3572)	Analytical services and development in geochemistry	Hall, GEM	MR	MC	C	-

Obj: To provide for the present and future analytical service requirements of the Geological Survey.

590457 (3551)	Radiocarbon laboratory development and operation	McNeely, RN	TS	QG	-	Ont

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.

NTS: 31 G

610019* (3522)	Ordovician and Silurian Biostratigraphy of British Columbia, Alberta, Manitoba Yukon, Mackenzie & Franklin	Norford, BS	ISPG	P	MaP	Frank Mack Yk BC Alta

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.

NTS: 36; 37; 47-49; 54; 57-59; 67-69; 82 J; 83; 85; 94; 95; 96; 97; 104 I,P; 105 I; 106; 116, 117; 120; 340

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* in first column indicates project has a field component
- in first column indicates project is inactive
( ) bracketed number in first column indicates departmental classification
Brackets indicate seasonal employee or other non-staff
Underscoring indicates province of 1985-86 field work

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
610269 (3524)	Petrographic examination of coking coals from the Kootenay Group, Alberta and British Columbia	Cameron, AR	ISPG	CG	CT	Alta BC

Obj: To determine the coking properties, and to prepare seam profiles for correlation and environment of deposition studies, of coals of the Kootenay Group.

NTS: 82 G,J,O

620018 (3570)	Geological Survey of NTS 82 J W½ (Kananaskis Lakes, W½)	Leech, GB	MR	-	-	BC

Obj: To determine and interpret the stratigraphic structural and economic geological features of the region.

NTS: 82 J W½

620308 (3572)	Electron beam microanalysis	Plant, AG	MR	MC	Min	-

Obj: To conduct studies of geological materials using techniques of electron probe microanalysis and scanning electron microscopy, in support of Branch projects.

630016* (3511)	Coast Mountains project	Roddick, JA	C	-	CMG	BC

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.

NTS: 92 F,G,H,J,K,L,M,N; 93 D; 102 P; 103 A,G, I W½, J,N,P, W½

640048 (3572)	Study of mineral collecting areas of interest to collectors and tourists	Stenson, AP	MR	MC	Min	Que Ont Man

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

640402 (3571)	Certification of bedded and non-bedded mineral deposits	Findlay, DC	MR	EG	-	-

Obj: To act on behalf of the Director-General of the Geological Survey in the certification of mineral deposits as bedded or non-bedded for income tax purposes.

650003* (3521)	Geology of Cornwallis and adjacent smaller islands	Thorsteinsson, R	ISPG	RG	AI	Frank

Obj:
1. To improve the understanding of the age, structure, sequence, relationship, thickness of bedrock formations with a view of helping.
2. Assess the size, grade, mode of occurrence, origin and potentialities of any fuel or mineral deposit that may occur.
3. Improve the knowledge and understanding of the morphology of Silurian and Devonian ostracoderms of Cornwallis Island, thus aiding in the establishment of a more useful stratigraphic framework for the region and thereby contributing to (1).

NTS: 58 F,G; 68 E,H; 59 B

650007* (3567)	Ocean aeromagnetics	Bower, ME	G	A	-	Arctic Offshore

Obj:
1. To contribute to the development of high resolution airborne magnetometry.
2. To obtain aeromagnetic data for the Magnetic Anomaly Map of North America.
3. To investigate the validity of theories postulating the magnetic imprinting of oceanic rocks, ocean floor spreading and continental drift.
4. To delineate sedimentary basins on the Canadian and adjacent continental shelves.

650023 (359)	Operation Bow-Athabasca	Price, RA	DGO	-	-	BC Alta

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 and other geological data that are required to evaluate the mineral potential of the area and to assist exploration of oil, gas, coal and other mineral deposits in this and adjacent areas.

NTS: 83 C,D, E½, 82 J,E½,N E½, O, W½

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
650024* (3522)	Cambrian biostratigraphy of the Canadian Cordillera	Fritz, WH	ISPG	P	OP	Mack Yk BC
	Obj: To describe and assess biochronological significance of Cambrian trilobites in order to refine methods for dating Cambrian strata.					
	NTS: 106 B; 94 C-F; 116 B,C; 82 G,K,N					
650027* (3551)	Quaternary of southern Alberta	Stalker, AM	TS	QG	-	Alta Sask
	Obj: To gain knowledge of Quaternary stratigraphy, chronology, environments and climates in southern Alberta.					
	NTS: 72; 73; 82; 83					
650056* (3571)	Geology of lead and zinc resources in Canada	Sangster, DF	MR	MD	-	Nfld NS NB Que Ont Yk BC Frank Kee Mack
	Obj: To carry out comprehensive research on the geology of lead and zinc resources in order to: 1) support or provide geologically based estimates of Canada's mineral resources; 2) provide guidelines for their discovery; 3) provide advice to government for mineral policy and related matters.					
	NTS: 12 B,H,I,P; 11 C,G,J; 22 B,H; 48 B,C; 68 H; 95 D; 94 B,E; 105 B,L; 104 O; 85 B; 21 E; 31 C,E					
660006 (3531)	Granite studies in the Ennadai-Rankin Inlet region	Davidson, A	LCS	-	SG	Kee
	Obj: To classify the granitic rocks according to age, geological and chemical nature, using geophysical parameters where available and to relate this classification to the regional geology and mineral deposits.					
	NTS: 55 E,F,K,L; 65 H,I					
660009 (3531)	East Arm of Great Slave Lake, District of Mackenzie	Hoffman, PF	LCS	-	BS	Mack
	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 reconstruct the Paleogeographic history of the sedimentary basin.					
	NTS: 75 E,L,K; 85 H,I					
670002 (3531)	Operation Bylot	Jackson, GD	LCS	-	NC	Frank
	Obj: To provide a reconnaissance geological survey of a previously unmapped area and describe and interpret the broad geological framework and outline areas of potential economic interest.					
	NTS: 27; 37; 38; 47; 48					
670576* (3522)	Canadian Triassic Ammonoidea and Bivalvia	Tozer, ET	ISPG	P	OP	Yk BC Alta Frank
	Obj: To describe and assess biochronological significance of Triassic Ammonoidea and Bivalvia in order to refine methods for dating Triassic rocks.					
	NTS: 560; 59 G; 49 F					
680017 (3552)	Sedimentology-engineering geology laboratory development and operation	Pelletier, BR	TS	QE	-	-
	Obj: To standardize, develop, and/or bring into use various testing and/or analytical procedures available to the geoscientist; to develop new techniques and instrumentation; to ensure efficient operation of the sedimentology laboratories.					
680023* (3572)	X-ray diffraction analyses and mineralogical studies	Harris, DC	MR	MC	Min	Ont BC
	Obj: To provide X-ray diffraction analyses and mineralogical studies in support of Branch projects.					
	NTS: 42 D					
680031 (3551)	Quaternary stratigraphy of Old Crow Basin and Porcupine River Valleys	Hughes, OL	TS	QG	-	Yk Mack
	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.					
	NTS: 106 E,F; 115 P; 116 I, N E½, O,P; 117 A					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
680047* (3552)	Geomorphic processes, Mackenzie Valley-Arctic Coast	Heginbottom, JA	TS	TD	-	Mack

Obj: To investigate the processes involved in the growth of permafrost and ground ice under present day conditions, in order to understand better the processes associated with the past growth of permafrost in northern Canada.

NTS: 96 B-F; 106 E,F,I,P; 116 I,N,P; Pts 97 B,C,D,E,F; 107 A,B,C,D,E,; 117 A,D

680064* (3521)	Stratigraphy and Paleontology of Upper Paleozoic rocks on parts of Ellesmere, Melville and Axel Heiberg Islands	Nassichuk, WW	ISPG	P	MaP	Frank

Obj: 1. To improve the understanding of stratigraphy and facies relationships of the marginal and axial parts of the Sverdrup Basin;
2. to establish a biostratigraphic framework for Carboniferous and Permian rocks; and
3. to evaluate the economic potential of the area.

NTS: 49 B,C,F,G,H; 340 A,B,C,D; 560 A; 78 G; 79 B; 89 A; 88 H

680071 (3531)	Alkaline rocks in Canada	Currie, KL	LCS	-	PET	-

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

680081* (3567)	High resolution aeromagnetics (experimental surveys)	Olson, DG	G	A	-	Ont

Obj: To execute, according to prescribed specifications, high resolution experimental aeromagnetic and/or gradiometer surveys, over areas selected and defined by management, as a means of testing the effectiveness of the GSC aeromagnetic system in different geological contexts.

NTS: 40 O,P; 41 A,G,H,J,K; 31 D

680090 (3523)	Identification of unknown minerals and elemental analysis of sedimentary rocks by X-ray analysis and chemical techniques	Foscolos, AE	ISPG	PG	GC	-

Obj: Quantitative and semiquantitative analysis of layer lattice silicates, mixed layer silicates, clays, minerals and elements submitted by GSC staff, university professors and various government agencies.

680091 (3523)	Clay and clay minerals investigation	Foscolos, AE	ISPG	PG	GC	-

Obj: To improve and develop techniques for routine mineralogical and chemical analyses of clays and Canadian coals; to develop better techniques for quantitative, semi-quantitative and qualitative analyses of clays and clay minerals in sedimentary rocks and coals; to conduct research related to the crystal lattice structure of clay minerals. These studies also determine those parameters that affect: (1) the degree of sediment diagenesis and oil generating potential; (2) migration of fluids from source rocks which carry heavy metals.

680093 (3522)	Upper Silurian and Devonian biostratigraphy western and northern Canada	Pedder, AEH	ISPG	P	MaP	Sask Man Alta BC Yk Frank Mack

Obj: Elucidation of the sequences of Upper Silurian and Devonian faunas, especially corals, of western and northern Canada so that correlations of strata of these ages can be achieved. Description and illustration of fossils that have, or are expected to have, biostratigraphic significance. Paleoecological and biogeographic analyses of species and other taxonomic categories that have different time ranges in different geographic realms and ecologies.

NTS: 88 A,B,D; 49 A,B; 59 A; 82 B; 84 J; 85 C

680101 (3522)	Conodont biostratigraphy of Siluro-Devonian rocks of the Arctic Islands	Uyeno, TT	ISPG	P	MiP	Frank Kee

Obj: To set up conodont biostratigraphic framework for the Siluro-Devonian rocks of the Arctic Islands; to integrate this framework with zonations based on other fossil groups, such as graptolites, palynomorphs and brachiopods; to fix time lines in areas where strata undergo complex facies changes over relatively short distances. To determine the thermal maturity of the enclosing rocks with the use of conodonts.

NTS: 49; 57; 58; 59; 68; 69; 78; 89

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
680102* (3543)	Rank and petrographic studies of coal and organic matter dispersed in sediments	Hacquebard, PA	AGC	EPG	CG	NB Nfld NS Que PEI

Obj: To obtain information on local and regional changes in organic metamorphism, with application towards economic geology, search for oil and gas, and evaluation of properties of coking coals.

NTS: 12; 21; 11 F,G,K; 20

680109 (3543)	Palynological zonation of the Carboniferous and Permian rocks of Atlantic Provinces, Gulf of St. Lawrence and Northern Canada	Barss, MS	AGC	EPG	PGB	NS NB Nfld PEI Yk Mack Frank

Obj: To establish a comprehensive biostratigraphic framework of the Carboniferous and Permian succession and to reconstruct geological events and ecological environments, assist other disciplines to carry out stratigraphic, sedimentological and geophysical studies, facilitating a determination of the three dimensional geometry of the Carboniferous basins for resource evaluation.

NTS: 11 E; 1; 2; 11; 12; 95

680114 (3571)	Development and supervision of mineral deposits data bank	Garson, DF	MR	MD	MRIS	-

Obj: To develop files of data on mineral deposits and to supervise their operation in ways effective for the needs of the Geological Survey of Canada and, as far as it is practical, compatible with related files within the Department and with a National System for storage and retrieval of geological data. Two main types of files are involved:

1. documentary files of reports, maps and other published and unpublished information; and
2. computer processable files.

690038 (3571)	Probability models for estimating mineral potential and for geoprocessing	Agterberg, FP	MR	EG	MAG	-

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 to design quantitative methods for the integration and processing of various types of geoscience data.

690061 (3531)	Operation Penny Highlands	Jackson, GD	LCS	-	NC	Frank

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

NTS: 16 E,K-M; 26 H,P; 27 A,B; 36 P; 37 A,B

690064* (3551)	Quaternary palynology	Mott, RJ	TS	QE	PEc	NS NB Que Nfld

Obj: To study the quaternary palynology of Canada and to provide a biostratigraphic and paleoecologic information service to other scientists within the Division, Branch, or Department as well as other Government Departments and agencies and non-government institutions.

NTS: 11 D,E,F,K,N,O; 20 P; 21 A,G,H,J,O; 12 A,B,H,I

690065 (3551)	Surficial geology, St. Anthony-Blanc Sablon [illegible] Labrador and Newfoundland	Grant, DR	TS	-	RP	Nfld

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.

NTS: 2 M; 12 P

690075* (3512)	Foraminiferal Biostratigraphy of the Pacific Margin	Cameron, BEB	C	-	PMG	BC

Obj: 1. To prepare publications on the taxonomy and biostratigraphic significance of Mesozoic and Cenozoic Foraminifera of the onshore and offshore rocks of the Pacific Margin.
2. To prepare publications on the geology of specifically significant areas of the Pacific Margin.

NTS: 92 B; 103 F,G

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
690090 (3572)	Development of methods for the analysis of geological materials	Lachance, GR	MR	MC	Min	-

Obj: 1. To develop new methods in order to: i) meet demands when analyses are requested on materials for which the Section does not have prescribed methods; ii) meet demands when analyses are requested for elements or constituents for which the Section does not have prescribed methods; iii) extend the range of concentration and/or improve accuracy and/or improve productivity.
2. The objectives outlined in a) may be oriented towards: i) the analysis of a specific need such as the submission of a suite of unusual samples; ii) providing a detailed procedure that is made available to the analytical services component of the Section.

690095* (3552)	Properties and provenance of glacial sediments	Shilts, WW	TS	-	SR	Que Ont Nfld NS NB

Obj: 1. To build a data bank comprising chemical, petrologic, and geotechnical properties of till in Canada.
2. To define till provenance regions based on data from objective 1.
3. To clarify mechanisms and scale of glacial dispersal of rocks, minerals and trace elements.
4. To relate regional chemical and petrologic properties of till to engineering, geomedical, and biological problems that can be defined areally.
5. To develop and/or evaluate instrumentation and field techniques capable of providing information on thickness, character and properties of glacial sediments.
6. To derive from the record of lake bottom sediments information pertaining to late-glacial history, environmental changes and seismic events.

NTS: 11 E,F; 21 E,G,I,J,L,N,O,P; 22 A,B; 31 H; 42 A,E,H,I

700018 (3532)	Paleomagnetism and rock magnetism instrumentation and technological development	Christie, KW	LCS	-	PMag	Ont

Obj: To contribute to the development of paleomagnetism as a geophysical method:
1. by designing, building, testing and calibrating instrumentation required for the measurement of magnetic properties of rocks and minerals;
2. by developing new techniques or systems for the routine measurement of magnetic parameters of standard samples and for the processing of data resulting from such measurements; and
3. by improving on the design of existing instrumentation or techniques inorder to improve the efficiency of the laboratory and/or the quality of the data emanating from the laboratory.

700027 (3521)	Comparative studies of structural prototypes and/or sedimentary environments	Cook, DG	ISPG	RG	-	-

Obj: The objective is to familiarize the participants with the types of observations that may identify specific conceptual models of depositional environments to enable the participants to both recognize such environments and to critically evaluate the models proposed.

700034 (3522)	Devonian biostratigraphy of the northern Yukon Territory and adjacent District of Mackenzie and Alberta	Norris, AW	ISPG	P	MaP	Yk Mack Alta

Obj: 1. Delineation of facies distribution of Devonian rocks in northwestern Canada.
2. Identifying and determining ranges of fossils for refining zonation and correlation with other areas.
3. Determining distribution of faunal provinces and paleogeography of Devonian seas.
4. Obtaining more information on the Upper Silurian/Lower Devonian, Lower/Middle and Middle/Upper Devonian boundaries in Canada.

NTS: 116 (E 3/4); 117 (S½); 106 (W½); 74 M; 84 P; 85 A,B,C,F,G

700047* (3511)	Operation Finlay	Gabrielse, H	C	-	CMG	BC

Obj: To establish the stratigraphy, structure and geological framework to which the mineral deposits may be related as an aid to regional development.

NTS: 94 C,E,F

700056* (3551)	Surficial geology, Cape Breton Island, Nova Scotia	Grant, DR	TS	QG	-	NB NS

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 of the stratigraphy and age of Quaternary features and of the history of Quaternary events and environments including glaciation, deglaciation and local sea level change.

NTS: 11 D,E,F,K,N; 21 A,H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
700059* (3571)	Geology of copper and molybdenum deposits in Canada – I	Kirkham, RV	MR	MD	MDG	BC NB NS Nfld Ont

Obj: To carry out comprehensive research on the geology of copper and molybdenum deposits in order to:
1. support or provide geologically based estimates of Canada's mineral resources;
2. provide guidelines for their discovery; and
3. provide advice to government for mineral policy and related matters.

NTS: 11; 12; 42; 104

700092* (3542)	Surficial geology and geomorphology, Mackenzie Bay – Continental Shelf	Blasco, SM	AGC	EMG	SG	Arctic Offshore

Obj: To resolve the stratigraphic and structural relationships of the unconsolidated surficial marine sediments of the Beaufort continental shelf to provide the geological framework necessary for: the delineation of permafrost; the assessment of offshore aggregate supplies; the establishment of engineering design criteria for offshore structures for petroleum exploration and production; the resolution of the Quaternary history of the shelf area; the identification of sedimentary and geomorphic processes operating on the shelf; and to continue development of the technology necessary to conduct surficial marine geological surveys in ice covered areas of the arctic and in shallow coastal waters.

NTS: 87; 97; 107; 117

710020* (3551)	Surficial geology and land classification, Mackenzie Valley Transportation Corridor	Hughes, OL	TS	QG	-	Mack Yk

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, ground ice, and organic (muskeg) cover of the Mackenzie Valley Transportation Corridor in order to:
1. provide areal knowledge of geology and terrain, bearing particularly in mind the needs of government for terrain information in connection with land use planning, pipeline proposals and other aspects of petroleum development, and engineering construction; and
2. determine the Quaternary history of the region.

NTS: 96 C,D-F; 106 G,H-K,L,M,N,O,P; 107 A; 97 C; 116 N,O,P; 95 M

710022* (3522)	Carboniferous and Permian biostratigraphy and coral faunas, western and northern Canada	Bamber, EW	ISPG	P	MaP	Frank Mack Yk BC Alta

Obj: Establishment of faunal sequence within stratigraphic framework previously described for Upper Paleozoic of Alberta, British Columbia, Yukon, and District of Mackenzie, for use as a biostratigraphic reference succession in surface and subsurface exploration of these areas. Description of coral and other faunas from these areas to document the above succession and facilitate its use by other workers in industry and in other government organizations.

NTS: 49; 59; 69; 78; 79; 82 G,H,J,M,N,O; 83 B,C,D,E,F,G; 92 I; 93 I,O; 94-95; 103-106; 115-117; 340; 560

710023 (3531)	Granite studies in the Slave Province (Phase 1)	Davidson, A	LCS	-	SG	Mack

Obj: To classify the granitic rocks according to age, geological and chemical nature, using geophysical parameters where available, and to relate them to the regional geology and to mineral deposits.

NTS: 85 I,P

710033 (3521)	Northern Basin Analysis Program: Redstone and Great Slave Lake map-areas	Williams, GK	ISPG	PG	PR	Mack

Obj: 1. To maintain an up-to-date inventory of subsurface data, mainly in the form of maps, cross-sections and lithologic logs within the Great Slave Lake and Redstone Map-areas.
2. To provide an improved understanding of the geological history of the northern Canadian mainland.
3. To compile, in a form suitable for publication (primarily Open File format) all data and ideas so far accumulated.

NTS: 85; 95

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
710059* (3543)	Stratigraphy and sedimentology of the Mesozoic and Tertiary rocks of the Atlantic continental margin	Jansa, LF	AGC	EPG	SGBM	Atlantic Offshore

Obj: To determine stratigraphy and sedimentology of the Mesozoic and Tertiary rocks of the Atlantic continental margin and the basin; delineate distribution of clastic, carbonate, evaporite sequences, their thickness, composition, provenance, current patterns, depositional environment and porosity development as an aid to the resource evaluation of this region.

710061 (3543)	Compilation of geoscientific data in the Upper Paleozoic basins of southeastern Canada	Howie, RD	AGC	EPG	PBG	NS NB Nfld PEI

Obj: Compile data for a detailed study of the petroleum potential of the Magdalen and Sydney basins.

NTS: 1; 2; 10; 11; 12; 14; 20

710065 (3543)	Biostratigraphic zonation (Foraminifera-Ostracoda) of the Mesozoic and Cenozoic rocks of the Atlantic Shelf	Ascoli, P	AGC	EPG	SGBM	Atlantic Offshore

Obj: To determine the biostratigraphic zonation (Foraminifera and Ostracoda) of the Mesozoic and Cenozoic in offshore wells of the Atlantic Shelf, to form the basis of local, regional and world wide correlation, and to accurately reconstruct geological events and ecological environments, to aid in the economic evaluation of the region.

710091* (3522)	Palynological studies of Mesozoic and Tertiary coal measures in western and northern Canada	Sweet, AR	ISPG	P	MiP	BC Alta Yk

Obj: To establish palyno-stratigraphic zonations of coal measures and contiguous strata as an aid to petrological, sedimentological and structural interpretations of coal basins.
Where applicable to correlate coal seams by means of spore and pollen histograms.
To describe and classify recovered pollen and spores as necessary to accomplish the above objectives.

NTS: 82 B,C,G,H,I,J; 83 C,E,F; 106 E; 117 A; 104 H

720044⁻ (3522)	Reconnaissance of Mesozoic Foraminifera of Arctic Islands	Wall, JH	ISPG	P	MiP	Frank

CURRENT INFORMATION NOT AVAILABLE

Obj: To assess the assemblage composition, paleoecology and biochronological significance of Mesozoic Foraminifera in the Arctic Islands in order to better define Mesozoic subsurface and outcrop stratigraphy.

NTS: 49; 59 E,G,H; 69; 79; 88; 89; 98; 340 B

720052 (3531)	Geology of Indin Lake (86 B)	Frith, RA	LCS	-	BS	Mack

Obj: To revise and interpret to modern standards the geology of the Precambrian terrane of the area known only through early reconnaissance and semi-detailed mapping.

NTS: 86 B

720056⁻ (3531)	Paleomagnetism of the dykes of west Greenland	Fahrig, WF	LCS	-	PMag	-

Obj: To determine the paleomagnetism of the diabase dyke swarms of west Greenland in order to examine the possible correlation of the rocks of this area with those of Baffin Island and the coast of Labrador.

720062 (3531)	Volcanic rocks of the Prince Albert Belt	Schau, M	LCS	-	NC	Frank Kee

Obj: To determine the structure, stratigraphy and petrology of the volcanic rocks of the Prince Albert Group and relationship to the adjacent gneisses and the enclosed basic and ultrabasic rocks; to evaluate the mineral potential of the belt.

NTS: 47 A,D; 56 J,K

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
720066 (3526)	Evaluation of Canada's petroleum potential	Procter, RM	ISPG	PRAS	-	-

Obj: To create and maintain an inventory of oil and gas resources of all regions of Canada, both discovered (reserves) and undiscovered (potential); to provide data for the analysis of costs and supply of oil and gas; to develop methods of predicting size, rate of discovery, quality, reservoir character and other attributes of the resource base in order to assist in the development and analysis of energy policy.

720071* (3573)	Airborne Gamma-Ray Spectrometry (Experimental Surveys)	Holman, PB	MR	EGP	RG	Man NB Ont Que Sask Nfld NS

Obj:
1. Provide acceptable standards for the acquisition and compilation of airborne gamma-ray spectrometic data.
2. Demonstration of suitability of airborne gamma-ray spectrometry methods in various parts of Canada by:
   - conducting orientation surveys in advance of U.R.P. contract surveys.
   - conducting reconnaissance surveys maps.
   - conducting detailed follow-up surveys of areas of interest located by URP program.
3. Have available the technology and personnel to respond to nuclear accidents where aircraft monitoring is required.

NTS: 31 E,F,L,M; 21 G,H,J,O; 11 E; 64 H; 74 I,J,K; 2 D

720072 (3522)	Paleozoic ostracodes of Canada	Copeland, MJ	ISPG	P	OP	Ont Que NB NS Nfld

Obj: By means of microfaunas and non-trilobite Arthropoda to determine the zonation and correlation of strata among the Paleozoic sedimentary basins of Canada and thus aid in assessing the economic potential of these rocks.

NTS: 11 E,F,K; 12 B,E,L; 21 A,H,P; 22 A,B,H; 30 L,M; 40 I,P

720078 (3551)	Diatom analysis and paleoecological studies of Quaternary sediments	Federovich, S	TS	QE	PEc	Frank Ont

Obj:
1. To develop diatom analysis as a paleoecological tool in conjunction with palynological and plant megafossil analyses.
2. To provide paleoecological interpretation and biostratigraphic correlations of Recent and Quaternary sediments.

NTS: 38; 39; 48; 49; 59; 340; 560; 41 I; 31 E

720080 (3533)	Interpretation of aeromagnetic surveys	Kornik, LJ	LCS	-	LG	-

Obj: To express the significance of aeromagnetic data in terms of lithological structural and metamorphic patterns in support of mineral exploration, geological mapping and nuclear fuel waste disposal programs and to integrate this information with other types of geoscience data.

720081 (3551)	Surficial geology and geomorphology of Central Ellesmere Island	Hodgson, DA	TS	QG	-	Frank

Obj: To provide an inventory of surficial materials, landforms, geomorphic processes (active and inactive) and permafrost conditions, with particular reference to terrain information pertinent to the implementation of territorial Land Use Regulations and to the effects of the terrain on petroleum exploration and related activities.

NTS: Pts 49 C,D,E,G,H; 340 B

720084* (3573)	Gamma-Ray Spectrometry (Technique Development)	Grasty, RL	MR	EGP	RG	Ont

Obj: To develop improved methods of airborne gamma-ray spectrometry data collection, analysis and presentation.

NTS: 31 C

720098 (3521)	Lower Paleozoic stratigraphy, southern Rocky Mountains	Aitken, JD	ISPG	RG	M	BC Alta

Obj: To determine the nature, thickness, distribution and origin of Lower Paleozoic formations of the region.

NTS: 82; 83

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
720102 (3550)	Marine Science Atlas of the Beaufort Sea	Pelletier, BR	TS	QE	-	Mack Frank Yk

Obj: To compile known marine aspects of the Beaufort Sea including oceanography, biology, bathymetry, geology, geophysics, etc., in order to present a marine science atlas of the Beaufort Sea that will include maps, sketches, photographs and graphs. This atlas will serve the public, universities, industry and various agencies of government on engineering, environmental and resource-development programs.

NTS: 97 C,F,G; 107 A,B,C,D,E; 117 A,B,C,D

720103* (3543)	Hydrocarbon inventory of the sedimentary basins of eastern Canada	Bell, JS	AGC	EPG	SGBM	Atlantic Offshore

Obj: To provide, in a timely manner, geological data related to the hydrocarbon inventory of the sedimentary basins of eastern Canada when requested to do so by the Executive Director, Petroleum Resources Appraisal secretariat.
To assist in the integration and interpretation of geological data used for resource evaluation.

720104 (3543)	Regional subsurface geology of Mesozoic and Cenozoic rocks of the Atlantic continental margin	Wade, JA	AGC	EPG	SGBM	Atlantic Offshore

Obj: To provide a regional subsurface geological interpretation of the Atlantic continental margin of Canada as a basis for:
1. the Departmental Hydrocarbon Inventory;
2. to establish a framework for other specific studies such as lithostratigraphy, biostratigraphy, geochemistry, plate tectonics, etc.

NTS: 21 A,H

730013 (3552)	Quaternary geology inventory – Southern Keewatin	Shilts, WW	TS	-	SR	Kee

Obj: 1. To produce a map of southern Keewatin showing surficial geology at a scale of 1:500,000 from Chesterfield Inlet south to Manitoba and east of ~97°00'.
2. To produce maps for open filing at scales of 1:125,000 based on 1:250,000 NTS sheets,
3. To collect regional samples of till to describe its sedimentology, geotechnical properties, and geochemistry.
4. To elucidate the history of the south and central portions of the Keewatin Ice Divide.

NTS: 65 A-C,F-K,N-P; 55 D,E,F,L,K,N,O; 66 A-C,F-K,N-P; 56 D

730019* (3551)	Light drilling and sampling research and support	Nixon, FM	TS	QG	-	Mack

Obj: To support Section and Division requirements for subsurface information, and to contribute to this aspect of Geotechnique with emphasis on light equipment and remote work by (a) maintaining an expertise in drilling and sampling technique and equipment in order to evaluate proposals and suggest possibilities, and (b) developing and co-ordinating systems and procedures to be employed in Division personnel on appropriate problems.

NTS: 107 C

730027 (3551)	Late Cenozoic fossil insects and Late Cenozoic paleoecology	Matthews, JV Jr	TS	QE	PEc	Ont Que Yk

Obj: To provide biostratigraphic and paleoecologic information on late Cenozoic terrestrial sediments as an aid to interpretation of their age and environment of deposition.

NTS: 21 E,L; 31 G,H,I; 115 L; 116 J,K

730035 (3511)	Operation St. Elias	Campbell, RB	C	-	CMG	Yk BC

Obj: To determine the stratigraphy, structure, metamorphism, and relationship of intrusive and volcanic rocks, and to assess the mineral potential of the area.

NTS: 114 P,O; 115 A-C,F,G

730037 (3511)	Stratigraphy, structure, and metallogeny of Pelly Mountains, and Yukon Plateau, Yukon Territory	Tempelman-Kluit, DJ	C	-	CMG	Yk

Obj: To provide information on the relationship between stratigraphy, structure, sedimentary facies, and mineral deposits in Pelly Mountains and adjacent Yukon Plateau.

NTS: 105 A,F,G,H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
730040* (3531)	Archean volcanic studies in the Bear-Slave Province	Lambert, MB	LCS	-	BS	Mack

Obj: To determine 1) stratigraphic and structural relations; 2) location of volcanic centres; 3) sequence and types of volcanic eruptions and their environment of deposition; 4) relationship of mineral deposits to volcanic stratigraphy and volcanic processes.

NTS: 76 B,C,F,G

730043 (3531)	Volcanic rocks of the Appalachian region	Bostock, HH	LCS	-	BS	NB NS Nfld

Obj: To determine the physical volcanology, petrology, chemistry, environment, age and tectonic relations of the volcanic rocks of the Appalachian Orogen in order to relate them to the evolution of the orogen and to the formation of associated mineral deposits.

NTS: Pts 2 E/12, 5; 12 H

730044* (3531)	Granite studies in the Appalachians	Currie, KL	LCS	-	PET	NS Nfld NB

Obj: 1. To establish a set of criteria based on field, petrographic and chemical observations, by which granitoid rocks in the Appalachian region can be assigned to a limited number of well defined classes;
2. to establish the physical conditions of emplacement, fractionation trends, solidification history, and subsequent deformation of each of these classes;
3. to relate these classes to the tectonic development of the Appalachian region;
4. to evaluate the economic possibilities of each class, and possible factors enhancing these possibilities.

NTS: 2 E; 12 A,H; 21 G,H

730051 (3521)	Completion of reconnaissance geology, northern Ellesmere Island	Trettin, HP	ISPG	RG	AI	Frank

Obj: To prepare terminal reports accompanied by maps of the region at the scale of 1:250,000 or more detailed. To compile the Eureka sound sheet (NTS 340, 560, 120) of the 1:1 million geological atlas program.

NTS: 340 A-F,H; 120 B,C,F,G; 49 H; 560 D,E,F,G,H

730057 (3521)	Helikian and Hadrynian stratigraphy Eastern Cordillera and Interior Platform	Aitken, JD	ISPG	RG	M	Mack Yk

Obj: Firstly, to establish a coherent picture of Helikian and Hadrynian events in western and northwestern Canada, and secondly, to emphasize study of those events that may have created exploitable mineral and/or hydrocarbon deposits.

NTS: 95 L,M; 106 A,B,C,F,G,H; 105 P

730062 (3523)	Development of extraction, identification and correlation systems for organic compounds from sedimentary rocks and crude oils	Brooks, PW	ISPG	PG	GC	-

Obj: To develop, improve and adapt analytical techniques in organic geochemistry in order to facilitate the identification of petroleum source rocks and to assist in source rock-oil and oil-oil correlations. To develop and/or apply statistical methods to the geochemical data generated in the GSC labs and from outside organizations in order to correlate crude oils into genetic families or groups and to improve data handling and storage systems.

730067* (3511)	Geothermal Energy Resources in Canada	Souther, JG	C	-	CMG	BC

Obj: To make an inventory of the distribution, nature and geological setting of hot springs in Canada and the chemistry of their waters. To provide a base of geological information and expertise for geothermal results.

NTS: 92 J

730072* (3541)	Bedrock and surficial geology-Grand Banks	Fader, GB	AGC	RR	SBG	Atlantic Offshore

Obj: To contribute to our knowledge and understanding of the surface and subsurface geology, geologic history, and broad tectonic setting of the Grand Banks; and to aid in the economic evaluation of the region.

NTS: 1; 2; 11

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
730081 (3541)	East coast potential fields	Macnab, RF	AGC	RR	GPS	Atlantic Offshore

Obj: To acquire and compile potential field data in the Canadian East Coast offshore and adjacent oceanic basins, in support of investigations in various areas: deep composition of passive margins, boundary disputes; frontier energy; and LOS issues.

740003 (3543)	Geological interpretation of geophysical data as an aid to basin synthesis and hydrocarbon inventory	Grant, AG	AGC	EPG	LBG	Atlantic Offshore

Obj: To define the geologic structure and history of the sedimentary basins in the offshore regions of Eastern Canada.

NTS: 1-16; 27; 28; 38; 39

740017 (3531)	Metamorphism in the Canadian Shield	Fraser, JA	LCS	-	NC	Que Ont Man Sask Nfld Mack Frank Kee

Obj: To provide suitable maps and studies on metamorphism of the Shield which will focus on this parameter in such a way as to make a unique contribution to the understanding of the development of the Shield; and to provide regional and local information on metamorphic grade and history which will be of use in evaluating mineral resource potential of the Canadian Shield.

740019 (3531)	Archean felsic volcanic complex near Regan Lake, District of Mackenzie, NWT	Lambert, MB	LCS	-	BS	Mack

Obj:
1. To map in detail the felsic volcanic belt;
2. to establish criteria for the identification and interpretation of metamorphosed felsic volcanic in the Slave Province;
3. to establish a model for the history, environment and processes of volcanism that relate to this part of the Slave Province to provide a basis for resource exploration in this area.

NTS: Pts of 76 B,C,F,G

740042 (3522)	GSC Workshop travel – Micropaleontology Section	McNeil, DH	ISPG	P	MiP	-

Obj: To exchange information on current projects and techniques relating to palynology, foraminifers and other microfossils, during workshops of GSC's specialists; to plan programs in these fields and generally improve communication between the specialists in different Divisions.

740062 (3512)	Fraser Delta sedimentation	Luternauer, JL	C	-	PMG	BC

Obj: To provide a geological/sedimentological knowledge base about the active delta of the Fraser River for general land and waterfront planning and environmental management.

NTS: 92 G

740065 (3551)	Surficial geology inventory, Banks Island	Vincent, J-S	TS	QG	-	Frank

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, ground ice and organic cover, and undertake geomorphic process studies in order to provide areal knowledge of geology and terrain that will:
1. aid in the implementation of the Territorial Land Use Regulations;
2. be pertinent to engineering construction, petroleum exploration and related activities;
3. provide data relative to terrain sensitivity rating; and
4. elucidate the Quaternary history of the region.

NTS: 88 B,C,D,F; 97 G,H; 98 A-F

740067 (3551)	Surficial geology-terrain inventory, Bathurst-Cornwallis and eastern Melville Islands	Edlund, SA	TS	QE	PEc	Frank

Obj: Map, describe and explain the surface materials, landforms, ground ice and vegetation in order to provide areal knowledge of geology, geomorphology and terrain as background information suitable for land use management and various aspects of engineering construction and to determine the Quaternary history of the region.

NTS: 68 E-H; 69 A,B; 78 E-H; 79 A,B

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
740068* (3551)	Surficial geology, Ottawa Valley lowlands	Richard, SH	TS	QG	-	Ont Que

Obj: To map, describe and explain the unconsolidated deposits and landforms of the Ottawa Valley lowlands (31 G, 31 F (parts of) and 31 B (parts of) in order to provide geology and terrain information pertinent to land use planning, agriculture, urban and industrial development, forestry and engineering construction and to determine the Quaternary history of the region.

NTS: Pts 31 B,C,F,G

740072* (3551) Surficial geology of Newfoundland — Grant, DR — TS — QG — - — Nfld

Obj: To map and describe and explain the unconsolidated deposits and landforms in order to provide areal knowledge of geology and terrain as background information relative to land-use planning, mineral exploration, location of granular deposits, community water-supply problems, forestry, urban and industrial development, and various aspects of engineering construction, and to determine the Quaternary history of the region.

NTS: 1 M; 2; Pts 11 O; 12 A,B,G,H,I

740081* (3574) Environmental Geochemistry — Jonasson, IR — MR — EGC — ER — BC

Obj:
1. Understand the nature of physical and chemical processes which influence the dispersion of elements in the surficial environment.
2. Coordinate subdivision activities relating to environmental matters.
3. Provide appropriate surficial chemical and lithochemical support to Cordilleran sedimentary basin analysis studies.
4. Develop research program in geochemistry of geothermal fluids, both continental and submarine; and hence determine modes of genesis of epithermal mineralization on land and under sea.

NTS: 74 H,I; 64 E,L; 92 E,F; 94 F,G; 95 E,F; 106 F; 103 B,G;

740084* (3572) Silurian-Ordovician macro- [illegible] of Anticosti Island, Quebec — Bolton, TE — DGO — - — SP — Que NB NS Kee Ont

Obj: To obtain data on the Silurian and Ordovician rocks of Anticosti Island, St. Lawrence platform and Maritime regions to provide:
1. precise descriptions for all appropriate stratigraphic units of their succession, thickness, lithology, facies change, faunal content;
2. descriptions of significant fauna for each stratigraphic unit; and
3. local and regional correlations consistent with the data.

NTS: 22 A,B,D,H; 12 E,F,L; 18; 11 F; 45; 46; 31 G,H; 32 A

740091* (3573) Borehole Geophysics (Electrical [illegible] Geophysical Techniques) — Dyck, AV — MR — EGP — BG — BC Ont Que NB Man Sask Nfld

Obj: To contribute to the development of borehole mining geophysics technology as a means of improving the efficiency and effectiveness of mineral exploration practices, geophysical techniques applied to engineering and geological mapping.

NTS: 41 I,J; 52 B; 31 F,K; 74 H,I; 64 C,H,L; 62 I; 32 D,E, 12 A

740098* (3571) Metallogeny of the northern Canadian Cordillera — Dawson, KM — MR — MD — RMS — BC Yk

Obj: To integrate present mineral commodity and regional geological studies in order to:
1. examine the large scale geological controls and distribution of known mineral deposits;
2. assist in planning of future geological mapping; and
3. assess the area with regard to its mineral potential.

NTS: 92 H,J,O; 82 K,M; 103 G; 104 N,O,P; 105 A,B,F,G; 95 D,E,L; 114 P

740107* (3574) Trace elements in sulphides — Jonasson, IR — MR — EGC — MDG — Ont BC Yk Mack Que

Obj:
1. To determine the typical contents and ranges of trace elements, (plus their stable isotopes) including metals, metalloids and non-metals in ores, ore minerals and accessory minerals.
2. To assess the value of such data with regard to classification of ores, estimates of ore reserves of rare metals, definition of geochemical and metallogenic provinces, establishment of environment baseline levels.
3. To provide a systematic geochemical inventory for regional surveys carried out on land and in offshore areas of Canada's economic zone, west coast.

NTS: 42 A; 32 D; 31 A,B,C,F,M,P; 94 F,G; 104 N; 101 A,B

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
750006 (3531)	Stratigraphy and petrology of the Natkusiak Basalts, Victoria Island	Baragar, WRA	LCS	-	SP	Frank

Obj: To determine the variation in chemical composition and petrography of the lavas with stratigraphic level, to obtain representative bulk compositions of the flows, to determine relationships between the composition of the flows and associated copper prospects and between the flows and accompanying sills, and to obtain contributory information towards an understanding of late Precambrian tectonic history in the northwestern Canadian Shield.

NTS: Pts of 77 G; 78 B; 87 E,F,G,H; 88 A,B

750010* (3571)	Geology of Uranium and Thorium Resources in Canada	Ruzicka, V	MR	MD	RMRA	Ont Sask Kee Mack Que NS Nfld NB

Obj: To carry out comprehensive research on the geology of uranium and thorium deposits in order to:
1. support or provide geologically based estimates of Canada's uranium and thorium resources;
2. provide guidelines for their discovery; and
3. provide advice to government for nuclear energy policy and related matters.

NTS: 41 I,J; 52 A,H; 64 E,L; 74 G,H,I; 65; 75; 21; 22 M; 23 D; 12; 20 P

750011 (3531)	Geology, petrology and economic potential of the anorthosite suite in southern Labrador	Emslie, RF	LCS	-	PET	Nfld

Obj: 1. Comparison of rock types, rock and mineral chemistry, and structures with similar features north of the Grenville Front.
2. Estimation of the grade of regional metamorphism in this part of Grenville Province.
3. Determination of age of the anorthosite suite of rocks.
4. Investigation of the economic mineral potential of the anorthositic rocks.

NTS: 13 B,C,E,F,G; 23 A

750023 (3526)	Methodology of petroleum resource evaluation	Lee, PJ	ISPG	PRAS	-	-

Obj: To provide a reliable, effective and statistically valid methodology for estimation of resource abundance.

750035* (3511)	Biostratigraphic study of Mesozoic rocks in the Intermontane and Insular Belts of the Canadian Cordillera	Tipper, HW	C	-	CMG	BC Yk

Obj: To determine the biostratigraphic succession of the Mesozoic strata, particularly Jurassic, and to define a geological history and paleogeography in the evolution of the Mesozoic model.

NTS: 92 H,L; 93 E; 94 D; 103 C,F,G; 104 H-K, M,N; 105; 115

750036 (3522)	Silurian and Devonian spores of Canada	McGregor, DC	ISPG	P	OP	-

Obj: To refine palynological methods of dating and correlating Silurian and Devonian rocks of Canada, by
1. identifying and describing Silurian and Devonian spores;
2. determining their value in terms of regional and world wide biostratigraphy; and
3. establishing stratigraphic reference sections and zonations for spores in Silurian and Devonian sedimentary basins in Canada.

750039 (3574)	Automated Geochemical Cartographic Development	Ellwood, DJ	MR	EGC	RGS	-

Obj: To develop new methods and improve established methods of mapping geochemical data by computer, to develop computer systems which use these methods, and to produce geochemical maps in various forms and at various scales.

750043* (3542)	Consulting advice on physical environmental problems in the coastal zone	Taylor, RB	AGC	EMG	SG	Nfld NS NB

Obj: To provide consultation and expertise on environmental problems in the coastal zone of the Maritimes. This advice is to be provided in response to specific requests.

NTS: 10 N; 11 D,K; 21 H,P

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
750051* (3574)	National geochemical	Hornbrook, EHW	MR	EGC	-	-

Obj: 1. To provide for governments and industry nationally consistent, systematic, multi-element, reconnaissance data to indicate areas of mineral commodity potential for exploration and resource appraisal purposes and to provide information on the natural abundance of elements in the environment.
2. To investigate geochemical variability in lake surveys in various terrains.

750061* (3531)	Lower Paleozoic geology of Eastern Canada	Sanford, BV	LCS	-	SP	Ont Que NB

Obj: 1. To continue detailed and regional studies of Lower Paleozoic terrain of eastern Canada,
- in northern and eastern offshore regions, reconnaissance mapping on an opportunity basis and
- in the southern regions, detailed mapping when required for terrain studies.
2. To study all data that become available from petroleum exploration for purposes of hydrocarbon evaluation of the frontier basins.

NTS: Pts 30; 31; 40; 41; 52; 21

750063* (3551)	Quaternary geochronology, Arctic Islands	Blake, W Jr	TS	-	A	Frank

Obj: 1. To establish a chronostratigraphic framework for Quaternary time in the Arctic Archipelago.
2. To investigate the suitability of other methods of age determinations, especially those beyond the range of ^{14}C.
3. To determine rates of crustal movement.
4. To reconstruct environments and events for as much of Quaternary time as possible.

NTS: 25-28; 29 F,G; 35-37; 38 F,G; 39 B,C,E-H; 47; 48 E,H; 49 A,B,D,E,H; 57-59; 67-69; 77-79; 87-89; 97-99; 120; 340; 560

750068 (359)	Interdepartmental & Intergovernmental Technical Services	Manistre, BE	DGO	-	-	-

Obj: To provide technical assistance to other government departments and agencies, particularly in connection with Geoscience Aid projects as required by the EMR/CIDA Memorandum of Understanding. To coordinate intergovernmental agreements, and attachments of visiting fellows under external auspices.

750069* (3571)	Geology of uranium resources of Canada 3	Bell, RT	MR	MD	RMRA	BC Yk Mack Alta Sask Man Que Nfld

Obj: To carry out comprehensive research on the geology of uranium deposits in sedimentary basins in Canada west of the Canadian Shield in order to:
1. provide or support geologically based estimates of Canada's uranium resources;
2. provide guidelines for discovery of deposits; and
3. provide advice to government for uranium policy and related matters.

NTS: 23; 24; 105; 115; 82 E

750072 (3551)	Quaternary geology, terrain inventory, northeastern Manitoba	Dredge, LA	TS	QG	-	Man

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, ground ice and organic cover in order to provide areal knowledge of geology and terrain as background information relative to land use planning and engineering construction, to provide data relative to terrain sensitivity rating and to determine the Quaternary history of the region.

NTS: 54 D,E,F,K,L,M; 64 I,J,K,L,M,N,O,P

750074 (3552)	Uranium drift prospecting techniques, Lower Kazan River area	Klassen, RA	TS	QG	-	Kee

Obj: To study glacial and postglacial processes that can affect the geochemical properties of till and other sediments and to investigate the use of till in mineral exploration for uranium and other metals.

NTS: 55 M,N,L; 56 C,D; 65 P,I,O; 66 A

750076* (3551)	Quaternary geology of the Canadian Cordillera	Fulton, RJ	TS	QG	-	BC Yk Alta Mack

Obj: To gather and synthesize information regarding Quaternary deposits, stratigraphy, geomorphology and chronology of the Canadian Cordillera.

NTS: 82; 92; 93 B,G; 103; 105 M; 115 P

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
750083 (3521)	Mesozoic stratigraphy and Basin analysis of Sverdrup Basin, Arctic Archipelago	Embry, AF	ISPG	RG	AI	Frank

Obj: 1. To determine regional stratigraphic relationships within the Mesozoic strata.
2. To determine environments of deposition of the strata.
3. To determine the geologic history of the Sverdrup Basin during the Mesozoic.
4. To assess the economic potential of the Mesozoic strata.

NTS: 29; 39; 49 E-H; 59 H; 69; 79; 87; 99; 120; 340 B,C; 560 A

750088 (3524)	Investigations concerning the optical properties of coals and dispersed organic materials	Kalkreuth, WD	ISPG	CG	CT	BC Alta

Obj: To provide information on metamorphism and petrographic properties of coal and dispersed organic matter for the GSC geologists, the data to be used for establishing metamorphic regimes for correlation of coal seams and other rock bodies and for estimating paleotemperatures and burial depths. Largely a service project.

NTS: 83 F

750094 (3571)	Development of computer-based statistical techniques applicable to regional geological and mineral deposit data	Chung, CF	MR	EG	MAG	-

Obj: Develop and apply statistical techniques as an input to methods for regional resource evaluation of geological data and mineral deposit data.

750098* (3571)	Metallogeny of the south-western part of the Canadian Shield	Franklin, JM	MR	MD	MDG	Man Sask Que Ont Frank Kee Mack

Obj: To provide a regional synthesis of the geology of a large part of the Canadian Shield south of Lat. 60° and west of Long. 25°, in order to determine the origin, setting and distribution of mineral deposits as an aid to prospecting and to the economic development of the region.

NTS: 31; 32; 41; 42; 43; 52; 53; 54; 62; 63; 64; 73; 74

750102 (3531)	Regional syntheses, southern Keewatin, Project I	Eade, KE	LCS	-	NC	Kee

Obj: To provide a single comprehensive source for all relevant data on the region; to prepare and have available for presentation broad regional and tectonic synthesis; and to have a designated "expert" who will be thoroughly familiar with the geological data and related economic aspects of the region.

NTS: 65 C

750108* (3512)	Marine surficial geology and sedimentation, British Columbia	Bornhold, BD	C	-	PMG	BC

Obj: In order to provide the sedimentological framework and geological perspective for environmental concerns and landmass description:
1. map, describe and explain in a systematic manner the physiography, surficial deposits, processes and history of the Pacific continental shelf, slope, deep sea, straits, and fiords of British Columbia;
2. determine the composition, distribution, transport mechanisms and flux of suspended particulate matter in the marine waters off the British Columbia coast.

NTS: 92 K; 103 A,B,F,G,J,K

750110 (3571)	Federal-Provincial and Federal Territorial mineral evaluation liaison and co-ordination	Findlay, DC	MR	EG	-	-

Obj: To provide technical advice and liaison on the Geological Survey's involvement in the design and monitoring of joint federal-provincial actions in mineral resource evaluation and development; to participate, as required in the co-ordination, implementation, and management of such projects; same for mineral evaluation projects in northern Territories (Yukon, NWT) conducted by GSC in cooperation with other agencies (eg. DINA).

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
760010* (3551)	Surficial geology, geomorphology and terrain inventory of the Ringnes and adjacent islands	Hodgson, DA	TS	QE	-	Frank

Obj: To map, describe and explain surficial materials, landforms, vegetation and active processes, in order to provide base data necessary for land management, for engineering studies and to determine the Quaternary history of the region.

NTS: 59 B,C,F; 69 A,C,D,E,F; 79 D,E; 68 G,H; 78 H; 88 G,H; 89 A,B

760014 (3571)	Geology of uranium deposits of Canada	Dunsmore, HE	MR	EG	MDG	NS NB Nfld Que

Obj: To provide geological information on the geology of uranium deposits in order to:
1. support or provide geologically based estimates of Canada's uranium resources;
2. provide guidelines for their discovery;
3. provide advice to government for uranium policy and related matters.

NTS: 11; 12; 21

760015 (3541)	Eastern Baffin Island shelf bedrock and surficial geology mapping program	MacLean, B	AGC	RR	EAOG	Arctic Offshore

Obj: To investigate and map the geology and near surface structure of the rocks occurring at the pre-Pleistocene unconformity on the eastern Baffin Island shelf and adjoining areas. To obtain geophysical data to put bedrock and surficial data in a regional context and to check the validity of geophysical interpretation against bedrock sample data. To investigate the distribution and geological history of the unconsolidated sediments on the eastern Baffin Island shelf and adjoining shelf areas.

NTS: Pts 15; 16; 17; 25; 26; 27; 28; 38

760023 (3531)	Precambrian geology of south-east Ellesmere, Devon and Cobourg Islands	Frisch, T	LCS	-	NC	Frank

Obj: To complete the reconnaissance geological mapping of the northern Churchill Province.

NTS: Pts 38 B; 39 B-H; 48 E-H; 49 A,B,D,E,H

760024 (3531)	Keskarrah Bay map-area, District of Mackenzie, NWT	Henderson, JB	LCS	-	BS	Mack

Obj: To determine the extent and significance of Archean basement rocks in the area; to identify stratigraphic control of base metal mineralization to improve understanding of iron formations and their significance in the region; and to obtain a better understanding of the evolution of an Archean basin in the Slave Province.

NTS: 86 H/2,3,6,7

760026 (3531)	Geology of Penrhyn Fold Belt, Melville Peninsula, NWT	Henderson, JR	LCS	-	NC	Frank

Obj: To determine the structural, metamorphic, stratigraphic and age relations between basement gneisses and migmatites, and the covering Penrhyn Group metasedimentary gneisses and schists. To elucidate the structural development of polyphase folds in an area of high-grade metamorphic rocks. To provide structural-stratigraphic and isotopic age bases for regional correlation.

NTS: 46 O,P; 47 A

760027* (3531)	Redbed sequences in Canada	Chandler, FW	LCS	-	PET	Ont Que

Obj: To determine the origin and sedimentological and tectoic processes that yield redbed sequences; to determine the influences of climate, topography, weathering, sedimentation and diagenesis on their origin; and to determine the processes which contribute to the concentration of economic minerals in redbed sequences.

NTS: Pts 31; 41

760042* (3522)	Jurassic biostratigraphy and paleontology of selected areas of western and Arctic Canada	Poulton, TP	ISPG	P	MaP	BC Alta Yk Frank Mack

Obj: To provide detailed biostratigraphic and lithostratigraphic data on Jurassic rocks of selected parts of British Columbia, Alberta, Yukon Territory and Northwest Territories, by field work and study of submitted fossils. To describe taxonomically the most important faunal elements.

NTS: 82 G,J,N,O; 83 C,E; 92 H,L,N,O; 93 O; 94 B; 103; 104 I,J; 105 D; 106 D,M; 107 M; 115; 116 A,B,C,N,O,P; 49; 59; 69; 79; 89 A; 340 D; 560

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
760047 (3574)	Regional geochemistry-Northern Canadian Shield	Maurice, Y	MR	EGC	GMR	Mack Kee Frank Sask

Obj: To determine the nature and factors affecting the distribution of trace elements within bedrock, overburden and stream and lake waters and sediments, etc. in order to:
1. evaluate the effectiveness of the NGR program (project 750051) and improve the operating techniques and specifications;
2. provide methodology for interpreting and following up NGR reconnaissance results;
3. assess the mineral potential of various regions and rock units with emphasis on granitoid rocks.

NTS: 76 H,I; 75 E,F-K; 74 H; 46 N,O,P; 47 A,B,E,F

760053 (3523)	Hydrocarbon geochemistry of Arctic Archipelago	Snowdon, LR	ISPG	PG	GC	Frank

Obj: To determine presence or absence and quality of petroleum source rocks and petroleum product type so that reasonable gas/oil ratios may be determined; to calculate probable or maximum maturation levels so that maturation isopleths can be plotted and used to map probable petroleum regions; to quantitatively evaluate hydrocarbons dispersed in fine grained rocks in order to estimate relative amounts of petroleum in various regions or plays.

NTS: 98; 88; 78; 68; 58; 99; 89; 79; 69; 59; 49; 560; 340

760054 (3523)	Hydrocarbon geochemistry of Canadian East Coast offshore	Snowdon, LR	ISPG	PG	GC	Atlantic Offshore

Obj: To determine presence or absence and quality of petroleum source rocks and petroleum product type so that reasonable gas/oil ratios may be determined; to calculate probable or maximum maturation levels so that maturation isopleths can be plotted and used to map probable petroleum regions; to quantitatively evaluate hydrocarbons dispersed in fine grained rocks in order to estimate relative amounts of petroleum in various regions or plays.

NTS: 14; 3; 10; 11; 20

760056 (3524)	Resource evaluation and geology of coal deposits of western Canada	Dawson, FM	ISPG	CG	RE	Alta

Obj: To conduct resource evaluation programs required for the National Coal Inventory and to recommend the office and/or field studies to be undertaken to meet the requirements of the inventory program. To acquire industry and provincial government data on Canada's coal deposits. To study the geological framework within which these coals occur. To provide authoritative advice to senior Departmental officials and to scientists in government and industry on the resource potential of Canada's coal deposits. To maintain an up-to-date knowledge of coalfields in Canada.

NTS: 83 A,H

760058* (3551)	Vegetation distribution and relationships to surficial materials and climatic patterns – Arctic region	Edlund, SA	TS	QE	PEc	Frank Mack Kee Yk Que Nfld

Obj: 1. To map and describe vegetation distribution and plant communities as they relate to selected areas of the Arctic.
2. To relate modern vegetation distribution with surficial materials and climatic parameters.
3. To derive data on Holocene vegetation and climate using modern vegetation-climate relationships as an analogue.

NTS: 78 A,B,D; 77 G,H

760061* (3531)	Regional synthesis of the Grenville Province in Ontario and western Quebec	Davidson, A	LCS	-	SG	Ont Que

Obj: To effect a regional synthesis of the geology of the Grenville Province in Ontario and western Quebec and to interpret the synthesis in terms of the geological evolution of the area, and in cooperation with project 750062, of the Grenville Province as a whole.

NTS: Pts 31; 41; 32

760062* (3521)	Geology of bedded phosphates deposits in Canada	Christie, RL	ISPG	RG	AI	BC Alta

Obj: To identify Canadian phosphate resources and to develop an understanding of the regional geology relationships: patterns and occurrences, associations, facies, paleogeography, etc.

NTS: 82

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
760063 (3523)	Hydrocarbon geochemistry of northern interior plains and Beaufort Sea	Snowdon, LR	ISPG	PG	GC	Yk Mack

Obj: To determine presence or absence and quality of petroleum source rocks and petroleum product types so that reasonable gas/oil ratios may be determined; to calculate probable or maximum maturation levels so that maturation isopleths can be plotted and used to map probable petroleum regions; to quantitatively evaluate hydrocarbons dispersed in fine grained rocks in order to estimate relative amounts of petroleum in various regions or plays.

NTS: 106; 107; 117

760064 (3571)	Geology of Mineral Resources in the Oceans	Gross, GA	MR	-	SP	-

Obj: 1. To provide a base of geological information for identifying and determining the kinds, distribution and possible extent of ocean mineral resources, and for evaluating their significance to Canada.
2. To provide a direct and independent national competence for evaluating these resources and for appraising implications of their development with respect to Canadian mineral policy and the use and marketing of Canadian mineral products.

760065 (3567)	Digital Compilation of Queenair Aeromagnetic Data	Anderson, KW	G	A	GDP	-

Obj: 1. Compilation and publication of aeromagnetic contour maps relating to the yearly GSC Queenair airborne survey operations.
2. Improve modes of operations and presentations of the above data as new computer facilities develop.
3. Maintain up-to-date bank of data described above for ready retrieval for interpretation purposes.

770001* (3511)	Study of the Cenozoic Evolution of the Western Cordillera	Souther, JG	C	-	CMG	BC Yk

Obj: 1. To compile and publish a review of existing data on the Cenozoic geology of the Cordillera.
2. To obtain data from selected areas where additional data are required or which illustrate typical relationships.
3. To publish a series of topical papers based on selected field studies leading to a synthesis of the Cenozoic evolution of the Cordillera.

NTS: Pts of 82; 92; 93; 103; 94; 104; 95; 105; 115 A-C; 106; 116; 117; 114 O,P

770004* (3543)	Reconnaissance field study of the Mesozoic sequences out-cropping on the Iberian Peninsula	Jansa, L	AGC	EPG	SGBM	-

Obj: To provide evidence that the sedimentary sequences of the Iberian Peninsula are co-eval with similar sequences beneath the Grand Banks.

770006* (3512)	The Canadian Pacific Continental Margin	Yorath, CJ	C	-	PMG	BC

Obj: To describe the geological architecture and tectonic history of the Canadian Pacific Continental Margin including the Insular Belt and adjacent offshore. To contribute to the realization of the economic potential of the region.

NTS: 92 C,D,E,L; 102 H,I,O,P; 103 B,C,F,K

770013 (3531)	Operation Borden	Jackson, GD	LCS	-	NC	Frank

Obj: A study of the stratigraphy, sedimentology, and economic potential of the upper Proterozoic rocks (EQULULIK and ULUKSAN GROUPS) of northern Baffin and Bylot Islands, and of the relationships between these strata and the underlying basement gneisses. A basin analysis will supply data for comparison and possible correlation with strata of west Greenland and Arctic Canada.

NTS: Pts of 37 A; 38 B,C; 48 A-D

770015 (3567)	High Resolution Aeromagnetics (Instrumentation Development)	Sawatzky, P	G	A	-	-

Obj: To improve the performance of the GSC experimental high resolution/gradiometer survey system, in terms of sensitivity, precision, reliability, efficiency and endurance.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
770016* (3511)	Operation Dease	Gabrielse, H	C	-	CMG	BC

Obj: 1. To complete and update the 1:250,000 geological mapping of Cry Lake and Dease Lake map-areas and N½ Spatzizi.
2. To publish reports of field activities and papers on specific aspects of the geology of the region.
3. To complete and publish a final map and memoir on Cry Lake map-area and a final map and paper on Dease Lake map-area.

NTS: 104 G,H,I,J,O

770017 (3511)	Stratigraphy, structure and metallogeny of the northern part of the Intermontane Belt (Whitehorse trough) in the Canadian Cordillera	Tempelman-Kluit, DJ	C	-	CMG	Yk

Obj: To provide data on, and extend our understanding of, the relationships between stratigraphy, structure, sedimentary facies and mineral deposits on the northern Intermontane Belt of central Yukon.

NTS: 105 C,E,L; 115 I

770019- (3531)	Hepburn Batholith, Hepburn Lake map-area, District of Mackenzie	Hoffman, PF	LCS	-	BS	Mack

Obj: To provide an analysis of the deposition and deformation within a eugeosyncline, and describe the plutonic and metamorphic character of the batholith, in order to reconstruct the tectonic history and understand the significance of the batholithic-eugeosynclinal belt as a whole, including its mineral deposits.

NTS: 86 J,O

770020 (3511)	Kemano Project	Woodsworth, GJ	C	-	CMG	BC

Obj: To produce a report and geological map of Whitesail Lake (W½) map-area, on a scale of 1:250,000, with one or more 1:50,000 maps of the most critical areas.

NTS: 93 E

770024* (3571)	Geology of uranium resources of Canada-V	Gandhi, SS	MR	MD	RMRA	BC Mack NS Nfld

Obj: To carry out comprehensive research on the geology of uranium deposits in order to:
1. support or provide geologically based estimates of Canada's uranium resources;
2. provide guidelines for their discovery;
3. provide advice to government for uranium policy and related matters.

NTS: 75 E,F,J,K,L,N,O,P; 76; 85; 86 K; 21 H; 13 H,J,K,L,O

770025* (3571)	Regional Geochemistry – Yukon	Goodfellow, WD	MR	MD	MDG	Yk

Obj: 1. To determine through regional geochemical surveys the mineral potential of the Yukon.
2. To assess through regional detailed studies the use of various geochemical sample media as a fundamental step towards the development of geochemical methodology appropriate to the project area.
3. To provide a data base for the compilation of a National Geochemical Reconnaissance Map as a contribution to the mineral potential inventory of the nation.

NTS: 105 B,C,D,E; 115 A,H,I,J,K,N,O

770028- (3531)	Regional Synthesis – Baffin Island: Project I	Jackson, GD	LCS	-	NC	Frank

Obj: Regional synthesis of all aspects of the Precambrian geology of Baffin, eastern Devon and southeastern Ellesmere Islands in the District of Franklin, N.W.T.

NTS: 56-59; 45-49; 34-38; 24-27; 14-16

770030* (3551)	Géologie du Quaternaire, région de l'Outaouais supérieur Québec	Veillette, JJ	TS	QE	-	Que Ont

Obj: Cartographier, décrire et expliquer les dépôts meubles formés de terrain, avec objectifs secondaires de:
1. Fournir des données relatives à l'utilisation du sol, à la prospection et localisation de sable et gravier, aux réserves d'eaux souterraines, à la prospection géochimique.
2. Determiner les propriétés physiques et mécaniques de certain dépôts.

NTS: 31 M,L; 32 C,D,E,F

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
770031 (3551)	Surficial geology and terrain evaluation, southern Yukon	Klassen, RW	TS	QG	-	Yk BC

Obj: To map, describe and explain the surficial materials and landforms and to provide areal geologic-geomorphic data and knowledge of the stratigraphy, age and history of surficial deposits to provide background information for land-use planning and engineering development.

NTS: 94 M; 95 D; 104 P; 105 A-D,E,J,K,L; 115 A,H,I; 114 P

770032⁻ (3552)	Geological characterization of Arctic lakes: sediment properties and sedimentary processes	Adshead, JD	TS	QG	-	Kee

Obj: To characterize Arctic lakes by providing a framework of mineralogical and compositional data on lake sediments and watersheds, and to evaluate postglacial sedimentation and diagenetic processes to assist 1) potential construction activities, 2) environmental impact studies, and 3) mineral exploration programs.

NTS: 66 A,H; 65 A,H,I,P; 55 E,F,M; 56 D,E,N,K

770037⁻ (3552)	Slope processes and cryogenic movements, Arctic Islands	Heginbottom, JA	TS	TD	-	Frank

Obj: To document the nature, extent and rate of slope processes and cryogenic movements in a high-arctic, permafrost environment, and to determine the importance of surficial material, geomorphology, ground ice distribution, soil thermal and moisture regime, and other factors on them.

NTS: 58 F,G; 68 G,H; 79 B

770047* (3524)	Studies of coal deposits of western and northern Canada	Ricketts, BD	ISPG	CG	CG	Yk Mack Frank

Obj: To provide geologic data for the evaluation of late Paleozoic, Mesozoic and Tertiary coal resources of western and northern Canada; to prepare suitably illustrated geological reports for publication; to provide resource data for the National Coal Inventory.

CANCELLED

NTS: 116 B,C,F,G; 106 E,F; 59 E,F,G,H; 96 C,F; 39 H; 49 E,G,H; 58 G,H; 68 H; 340 B; 78 G

770048* (3522)	Brachiopods of the lower Upper Devonian Waterways Formation of northeastern Alberta	Norris, AW	ISPG	P	Map	Alta

Obj: To describe and illustrate the rich brachiopod fauna of early Frasnian (early Late Devonian) age that occurs in the Firebag, Calumet, Christina, Moberly and Mildred Members of the Waterways Formation outcropping along the Clearwater and Athabasca Rivers of northeastern Alberta (see GSC Memoir 313 by Norris). To describe brachiopod faunas of comparable age from elsewhere in Canada.

NTS: 74 D,E; 83 B,F; 84 P

770051 (3524)	The relationship between kerogen (type and rank) and chemical extract data, for the purpose of source rock evaluation	Kalkreuth, WD	ISPG	CG	CT	Alta

Obj: To assess kerogen type and degree of maturation by microscopical methods and correlate the results with organic geochemical data.

NTS: 82 J,O

770053 (3526)	Evaluation of Canada's Potential of Heavy Oil and Oil Sands Resources	Raicar, M	ISPG	PRAS	-	Alta Sask

Obj: To determine the extent of in-place resources; to evaluate various EOR processes to recover these resources; to determine the recoverable portion of these resources; to evaluate the impact of international and national price changes on the recovery of these resources in Canada.

770054 (3572)	Sample preparation and mineral separating	Delabio, RN	MR	MC	Min	-

Obj: To provide sample preparation and mineral-separating services in support of Branch projects.

770055* (3571)	Metallogeny of the northwestern part of the Canadian Shield	Roscoe, SM	MR	MD	RMS	Ont Que Mack Kee Man Sask

Obj: To provide a metallogenic basis for the evaluation of the mineral resources of the northwestern part of the Canadian Shield.

NTS: 46; 55; 56; 64; 65; 66; 74; 75; 76; 85; 86

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
770063* (3571)	Geology of Lead and Zinc resources of Canada – II	Lydon, JW	MR	MD	MDG	Yk Mack Que Man Frank Nfld

Obj: 1. Support or provide geologically based estimates of Canada's resources of these commodities.
2. Provide guidelines for their discovery.
3. Provide advice to government for mineral policy and related matters.

770067 (3526)	Canada Oil and Gas Pool data base-file	Skibo, DN	ISPG	PRAS	-	-

Obj: To incorporate and maintain a data base of all parametric data relevant to the accumulation and exploitation of oil and gas pools in western, frontier and offshore regions of Canada. To provide a data base suited to reserves calculation, resources estimation, input to economic (costing and project development) studies and for application of and research on statistical methodologies for the evaluation of undiscovered hydrocarbon resources potential in all petroliferous regions of Canada.

770071* (3571)	Geology of copper and molybdenum resources of Canada	Sinclair, WD	MR	MD	RMS	NS NB Frank Que Ont Kee Yk BC Mack

Obj: The project is one of comprehensive research on the geology of copper and molybdenum deposits in order to:
1. support or provide geologically based estimates of Canada's resources of these commodities;
2. provide guidelines for their discovery; and
3. provide advice to government for mineral policy and related matters.

NTS: 104 O; 105 A,B,C,D,F,M,O; 20 P; 21 G,J; 41 I; 42 C; 85 H,I,J; 115 N,O

770072 (3543)	Geological Survey representative on Steering Committee of the Kremp Palynologic Computer Research Project.	Barss, MS	AGC	EPG	PBG	-

Obj: To represent the Geological Survey and present the views of GSC palynologists to the KPCRP Steering Committee with regard to the operation and management of the project.

770077* (3522)	Paleozoic conodonts of eastern Canada	Nowlan, GS	ISPG	P	OP	Que Ont Man Kee NB NS Nfld

Obj: To describe and assess biochronological significance of early Paleozoic conodonts in order to refine methods for dating the rocks in which they are found. To assess the level of thermal alteration and paleoecological significance of the faunas.

NTS: 12 A,E,L; 11 E,F,K; 22 A,B,C,G,H; 21 A,G,H,I,L,O,P; 41 G,H; 31 C,F,G

780001 (3524)	Coal Resource Data Management	Mottershead, K	ISPG	CG	RE	-

CANCELLED

Obj: To plan and conduct investigations of the methodologies for coal resource assessment in undisturbed and disturbed coal measures. To establish and maintain coal resource data computer files of various coal deposits in Canada and apply, adapt or develop computer programs for the analysis and display of geological data and the compilation of coal resource estimates.

780002* (3552)	Glacial erosion of the Canadian Shield	Kaszycki, CA	TS	QG	-	Kee Ont Que

Obj: 1. To define and summarize ways of quantifying rates, depths and volumes of glacial erosion.
2. Define parameters that are most influential in controlling glacial erosion on the Shield.
3. To measure glacial erosion in selected test areas.
4. To evaluate recently developed differences of opinion on efficacy of glacial erosion on the Shield.

NTS: 55 E,L,K; 41 I; 21 E,L; 31 D,E

780003 (3523)	Petroleum Resource Evaluation of Western Canada	Osadetz, KG	ISPG	PG	PR	Alta BC Sask Man

Obj: To provide the geological-geochemical framework for the evaluation of resource potential hydrocarbons in Western Canada. This includes the development of a regional framework and the study of specific relevant plays leading to the estimate of the probable extent of undiscovered resources.

NTS: 62 E,F,L,K; 72 E-P; 73 C,D,E,F,K,L,M; 74 D,E; 82 H,I,J,O,P; 83; 84; 93 I,P; 94 A,B,G-K,N,O,P

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
780006* (3524)	Mineral Matter and Trace Element Content of Canadian Coals	Goodarzi, F	ISPG	CG	CT	Alta BC

Obj: 1. To determine if coal basins and seams within basins are specific in terms of mineral matter and trace element content.
2. To enlarge the data base for the interpretation of the depositional regimes within coal basins.
3. To relate mineral matter and trace element content to other compositional parameters.
4. To provide a data bank on environmental and utilization aspects of these coals.

NTS: 82 G,O,N; 83 A; 93 H,L

780008 (3531)	Macquoid Lake (W½), Thirty Mile and Tebesjuak Lake map-areas	LeCheminant, AN	LCS	-	NC	Kee

Obj: To interpret the geology of the area to a standard of 1:250,000 mapping, and thereby update the geological data base to improve regional tectonic syntheses. To investigate the structure and metamorphism of Aphebian and Archean gneisses and their relation to the Dubawnt group cratonic cover.

NTS: 65 P (W½); 65 O (E½); 55 M (W½)

780009* (3531)	Healey Lake map-area, District of Mackenzie	Henderson, JB	LCS	-	BS	Mack

Obj: To determine the general structural metamorphic and age relations of rocks on each side of the Thelon Front in order to better understand the nature of the boundary between Slave and Churchill provinces. To evaluate the economic potential of the area and to map it at the scale of 1:250 000.

NTS: 76 B

780012 (3531)	Stratigraphy and geochemistry of the volcanic rocks of the Circum-Ungava Belt	Baragar, WRA	LCS	-	SP	Kee Que

Obj: 1. To determine the petrochemical characteristics and the stratigraphic relationships of volcanic and related rocks of the Circum-Ungava Belt and to clarify the nature of their tectonic setting.
2. To examine the relationships of sheeted dykes to associated volcanic rocks and plutonic complex in the Troodos ophiolite, Cyprus, with a view to understanding the mechanism of formation of the oceanic crust and its possible bearing on Precambrian volcanic belts.

NTS: 44 I,P; 34 E; 35 C,F,K,L

780015* (3574)	Disequilibrium in the uranium series	Dyck, W	MR	EGC	GMR	Sask Ont BC

Obj: To determine the usefulness of disequilibrium in the U series in predicting the existence of U mineralization.

NTS: 31 F,G; 64 L; 74 I; 92; 102

780016* (3552)	Drift prospecting methods and models	DiLabio, RNW	TS	QG	-	Ont Que Nfld Man

Obj: 1. To model glacial dispersal from known sources.
2. To develop drift prospecting methods for use in clay belts.

NTS: 14 D; 24 A; 23 J; 32 C,D; 42 C; 64 B,C,F,G; 42 A; 31 L; 63 A,H; 53 F,K,L,N

780017 (3551)	Correlation of Quaternary geology; Great Lakes – St. Lawrence Valley region	Gadd, NR	TS	QG	-	Ont Que

Obj: To resolve apparent age discrepancies in Pleistocene stratigraphic sequences of the lower Ottawa – upper St. Lawrence valleys and adjacent Lake Ontario basin. To provide a basis for regional compilation and synthesis of Quaternary geology in southern Ontario and southwestern Quebec.

NTS: 31 B,C,F,G,H,L; 21 E,L,M

780018* (3552)	Surficial geology and Quaternary stratigraphy of north Baffin-Bylot Islands	Klassen, RA	TS	QG	-	Frank

Obj: To provide information on the history and mode of deposition and the distribution and origin of Quaternary sediments in the northern part of Baffin Island and of Bylot Island, for use by environmental and development groups that may require knowledge of the area, and to provide data applicable to drift prospecting techniques.

NTS: 38 B,C; 48 A,D

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
780021 (3542)	Landsat Calibration for Suspended Sediment Concentration in Marine Coastal Environments	Amos, CL	AGC	EMG	SG	-

Obj: 1. To initiate cooperative research between A.G.C., C.C.R.S. and other marine agencies abroad, with a view to extending a calibration of Landsat radiance vs. suspended sediment concentration. Originally applied to the Minas Basin.
2. To extend the Minas Basin calibration.
3. To relate the available Seasat program to Landsat measures.

780022 (3542)	Sediment Dynamics at the Head of the Bay of Fundy	Amos, CL	AGC	EMG	SG	NS NB

Obj: 1. To determine the mass input, transfer and removal of sediments to Chignecto Bay, inclusive of Shepody Bay and Cumberland Basin.
2. To develop a numerical model to assess the affects of a Fundy Tidal Power Development on the distribution and accretion of sediments.
3. To formulate a methodology of assessing the implications of marine constructions on sediments in macrotidal regions.

NTS: 21; 11

780024* (3574)	Analytical control and standardization	Lynch, JJ	MR	EGC	RGS	Ont Que NB

Obj: 1. To obtain sample preparation and a variety of analytical services from commercial sources under contract for subdivision and RGR.
2. To provide analytical methodology, the use of which will permit the acquisition of accurate, precise and regionally compatible analytical data for the subdivision and RGR surveys under Federal, Provincial, and MDA jurisdiction.
3. To provide various types of international geochemical reference samples and to provide certified values for a large number of elements for these samples.

780025 (3531)	Archean Rocks of the Nain Province in Hopedale (13 N), Snegamook Lake (13 K), and Makkovik (13 O) map-areas, Labrador	Ermanovics, I	LCS	-	SG	Nfld

Obj: 1. To produce maps (suitable for publications at 1:100,000) and comprehensive reports on the geology and economic mineral potential of the Archean rocks in these areas.
2. To monitor, compile and synthesize results of the geological mapping of Labrador to be carried out under the Canada – Newfoundland Mineral Development Subsidiary Agreement.

NTS: 13 N,K,O

780026 (3550)	Quaternary paleo-sealevel map of Canada	Pelletier, BR	TS	QE	-	-

Obj: To produce a synthesis of sealevel phenomena for the Quaternary period.

780028 (3511)	Detailed Geological study of selected areas within the Foothills and Rocky Mountain Belts of the Monkman Pass map area – with emphasis on the structure	Thompson, RI	C	-	CMG	BC Alta

Obj: To map at 1:50,000 scale: map sheets 93 I/1, 2E½, 7E½, 8 and adjacent parts of map areas 93 H/16 and 83 E/13W½ as a data base for the preparation of structural interpretations across the area.

NTS: 93 H,I; 83 E

780029⁻ (3522)	Mesozoic and Cenozoic Foraminifera of the Arctic Western mainland of Canada	McNeil, DH	ISPG	P	MiP	Yk Mack

Obj: To establish the biostratigraphic distribution and significance of Mesozoic and Cenozoic foraminifers in the Arctic western mainland of Canada, with particular emphasis on the Mackenzie Delta-Beaufort Sea area.

NTS: 95; 96; 97; 105; 106; 107; 115; 116; 117

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
780032 (3571)	Lead isotopic studies on genesis of ore deposits	Thorpe, RI	MR	MD	MDG	-

Obj: 1. To do lead isotopic studies of ore deposits in order to improve our understanding of the age and genesis of these deposits.
2. To derive a lead isotope model that will be useful in refining genetic models for many types of ore deposits.
3. To coordinate the obtaining of lead isotope analyses for the members of the Mineral Deposits Geology Section and the assignment of priorities for such analyses.
4. To aid members of the section in interpretation of analyses that have been carried out for other projects.

780033* (3551)	Quaternary paleoecology, Great Lakes	Anderson, TW	TS	QE	PEc	Ont Que

Obj: To describe, analyze and explain unconsolidated deposits and associated organic remains in 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 background geological information for other scientific studies in the Great Lakes.

NTS: 21 E; 31 B,C-F,G-L; 41 H-K

780035 (3552)	Remote sensing applied to Quaternary geology and mineral tracing	Belanger, JR	TS	QG	-	Yk Kee Que Frank Mack Ont

Obj: To evaluate the potential use of remotely sensed, multispectral data for terrain evaluation, terrain mapping, Quaternary geology and mineral tracing. To apply appropriate processing techniques for remotely sensed data to Quaternary geology and related terrain studies in selected test areas in Canada.

NTS: 66 M; 67 A-C; 87 A-F; 88 A-B; 21 E; 31 G

780039* (3521)	Jurassic and Cretaceous Minnes Group, Alberta and British Columbia	Stott, DF	ISPG	RG	M	Alta BC

Obj: To describe the stratigraphic succession and petrography to document fossil flora and fauna; to provide data on correlation of these strata, their lateral variation, their potentialities as sources of oil and gas, and their suitability as reservoirs for those fuels.

NTS: 83 E,L; 93 I,O,P; 94 B,G,J

780042 (3541)	Comparative studies of the continental margins of the Labrador Sea and of the North Atlantic	Srivastava, SP	AGC	RR	EAOG	Atlantic Offshore

Obj: 1. To delineate subsurface structure across Labrador and west Greenland margins.
2. To determine the transition from the continental to oceanic crust across the margins.
3. To discuss the subsidence history of the margin as obtained from well data and to relate it to the subsurface structures.

780047 (3573)	Computer Methods and Calibration	Carson, JM	MR	EGP	RG	Sask Ont NB Alta

Obj: 1. To develop computer methods for compilation of radiometric data.
2. To develop software packages for airborne, ground, laboratory and borehole gamma ray spectrometric data.
3. To standardize and coordinate the calibration of radiometric systems.

NTS: 21 G; 31 G; 73 B; 82 O,P

780049 (3541)	Arctic Ocean: Seismic Refraction and Related Geophysical Measurements	Jackson, HR	AGC	RR	OBM	-

Obj: To collect seismic refraction, reflection and related geophysical data in the Arctic Ocean and interpret them at both a regional and global scale to provide:
1. a tectonic history of the Arctic;
2. a model for development of slow spreading ridges and relationship to other spreading centres such as those in Baffin Bay and the Labrador Sea; and
3. a crustal cross-section of the Eurasian Basin to be compared and contrasted to other basins.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
790002 (3574)	Geochemical data processing	Lund, NG	MR	EGC	SDS	-

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. To maintain in digital form, all geochemical data generated for the subdivision.
2. To improve data management support for the subdivision.
3. To provide [illegible] material for Federal RGR and provincial open file releases of geochemical data.
4. To provide for the public information concerning all RGR surveys since 1975.
5. To provide special data processing requirements for division staff.

790003* (3574)	Applied Geochemistry for the Cordillera	Ballantyne, SB	MR	EGC	GMR	BC Yk

Obj: 1. To develop and test geochemical exploration methods for the discovery of concealed ore deposits in a variety of geological and surficial environments in the southern Cordillera.
2. To assess the effectiveness of geochemical reconnaissance surveys in the planning of exploration programs and in appraising the resource potential of areas.

NTS: 104 B,M,N,O,P,I; 94 F,K,L; 105 B,C,D-F,I,M; 92 O,P; 106 D; 115 P

790004 (3574)	Geochemical Resource Evaluation Studies	Garrett, RG	MR	EGC	GMR	-

Obj: To develop, test and publish methodologies for evaluating data and integrating them with other geoscience data for the purpose of resource evaluation and interpretation. To assist other members of the subdivision in selecting appropriate methods of data analysis.

790005 (3551)	Quaternary geology, Mayo-McQuesten	Hughes, OL	TS	QG	-	Yk

Obj: To map, describe and explain the surficial materials and landforms and to provide areal geologic-geomorphic data and knowledge of stratigraphy, age and history of surficial deposits to provide background information for land use planning, engineering and mineral development.

NTS: 105 M; 115 P; 116 B,C

790006* (3512)	Marine Delta Sedimentation, British Columbia	Luternauer, JL	C	-	PMG	BC

Obj: To provide geological/sedimentological data base for delta systems in coastal British Columbia for general land and waterfront planning and environmental management.

NTS: 92 B,C,G; 103 G,H,I,J

790007 (3511)	Geology of Nahanni map-area, Yukon and Northwest Territories	Gordey, SP	C	-	CMG	Yk Mack

Obj: To update geological mapping in Nahanni map-area with emphasis on the distribution of stratigraphic units of the economically important Road River Formation and Earn Group.

NTS: 105 I

790009 (3531)	Kamilukuak Lake Map-area, District of Keewatin, N.W.T.	Tella, S	LCS	-	NC	Kee

Obj: To map the bedrock geology of the area at a standard of modern 1:250 000 scale mapping. Emphasis will be placed on the Dubawnt Group rocks, their extent, lithology, and relationship to the basement rocks.

NTS: 65 K,L; 66 H

790013 (3524)	Relationship of reflectance to chemical rank parameters of western Canadian coals	Cameron, AR	ISPG	CG	CT	Sask Alta BC

Obj: 1. To establish reference curves relating rank as determined by reflectance to rank as determined by chemical means.
2. To determine the relationship of varying maceral compositions on rank as determined chemically.

NTS: 62 F; 72 H,G,M; 82 G,H,J,O,P; 83 A,C,E,F,G,M; 93 J,O,P

790018 (3542)	Ice Scouring of Continental Shelves	Lewis, CFM	AGC	EMG	SG	Atlantic Offshore

Obj: To investigate the geomorphology and sedimentology of ice scour tracks and their relationship to bathymetry, geology, oceanography and drift ice with a view to interpreting the dynamics and history of ice impacts on the seabed in order to provide advice for resource management.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
790019 (3542)	Environmental Geology of Deep Ocean	Buckley, DE	AGC	EMG	G	Atlantic Offshore

Obj: 1. To investigate the capacity of the deep ocean sediments to maintain normal processes and environmental quality under conditions of stress imposed by waste disposal practices and resource exploration and exploitation.
2. To participate in the Seabed Working Group of NEA in order to maintan awareness of progress in feasibility studies for the disposal of high level nuclear waste in the seabed.
3. To participate in studies of the environmental effects of deep ocean mining.

790022 (3524)	Stratigraphy and sedimentology of the Lower Cretaceous Gething Formation, Rocky Mountain Foothills, Alberta and British Columbia	Gibson, DW	ISPG	CG	CG	Alta BC

Obj: To describe the Lower Cretaceous stratigraphic succession; to collect samples for laboratory studies, and to collect fossil flora and fauna; to provide data on the origin, distribution and continuity of coal seams throughout the region; to attempt to determine criteria useful in determining the sub-environments in which the fluvial-deltaic sediments were deposited, and to eventually provide a regional geological model that will be of assistance in determining the potential coal resources of this and other regions.

NTS: 83 L; 93 I,J,O; 94 B,G

790024 (3531)	Geology of the Foxe Fold belt (EAST HALF), Baffin Island	Henderson, JR	LCS	-	NC	Frank

Obj: To establish the stratigraphy, structure and metamorphism of the Aphebian sedimentary, volcanic and plutonic rocks in the Piling Group and their relationship to the rocks of the Mary River Group. The structural evolution of Archean "gneiss domes" in the area is also to be studies, and the economic mineral resource potential of the region evaluated.

NTS: A,B,C,D

790025 (3531)	Petrology, mineralogy, geochemistry and mineral potential of a Helikian non-orogenic granitic suite in central Labrador and adjacent Quebec	Emslie, RF	LCS	-	PET	Nfld Que

Obj: To improve understanding of the conditions and processes that control concentrations of U, Sn, Be, W and Mo in non-orogenic granitic suites.

NTS: 32; 22; 12

790027 (3551)	Quaternary stratigraphy Yarmouth region, Nova Scotia	Grant, DR	TS	QG	-	NS

Obj: To document the Quaternary stratigraphy of the southeast coast of Nova Scotia in the vicinity of Yarmouth.

NTS: 11 E,F; 21 H

790029* (3531)	Gneissic basement to the Fury and Hecla Formation and the Autridge Formation	Ciesielski, A	LCS	-	SG	Frank

Obj: To map the basement gneisses adjacent to the Fury and Hecla Formation and the Autridge Formation on Baffin Island at a scale suitable for publication at 1:100 000 or 1:250 000. Emphasis to be placed on basement cover relationships and the relationship of basement geology to radioactive anomalies.

NTS: 47 A,B,D,E,F

790030 (3511)	Geology of Nelson Map-area E/2	Reesor, JE	C	-	CMG	BC

Obj: 1. To update the geology of Nelson area to current requirements embodying new field work and scattered studies done since the original work in the late 1930's.
2. To provide a 1:250,000 synthesis of stratigraphy, structure, metamorphism and mineral deposit potential.

NTS: 82 F, E½

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
790031 (3521)	Geology of the Beaufort Mackenzie Basin	Dixon, J	ISPG	RG	M	Mack Frank Yk

Obj: 1. To integrate all available geological, biostratigraphic, geophysical, and geochemical data for the Tertiary in the Beaufort-Mackenzie Basin, in order to develop a stratigraphic-sedimentological framework and an appreciation of the petroleum potential.
2. Undertake detailed stratigraphic, sedimentological and petrographic analysis of selected zones within the Cretaceous and Tertiary in order to understand reservoir character and distribution.
3. To do detailed correlations of Lower Cretaceous-Upper Jurassic rocks in the subsurface, set up a stratigraphic framework and do sedimentological interpretations.

NTS: 97 F,H; 107 B,H; 117;

790033* (3574)	Geochemistry of Mineral Occurrences and their Host Rocks in the Northern Cordillera	Goodfellow, WD	MR	EGC	MDG	Yk Mack

Obj: Through geochemical studies, to assist in determining:
1. the origin of selected mineral occurrences;
2. criteria which can be used in the exploration for new and possibly deeply buried mineral deposits;
3. geochemical methodology for the identification and differentiation of stratigraphic units, thereby assisting in stratigraphic correlations; and
4. the evolution of marine environment during the Phanerozoic.

NTS: 105 F,I,N,O; 115 H

790034* (3573)	Shallow Seismic	Gagne, RM	MR	EGP	TG	Ont Que BC Alta

CURRENT INFORMATION NOT AVAILABLE

Obj: To map the velocity structure of surficial deposits by engineering seismic methods for geological mapping and site analyses.

NTS: 31 F,G,H,I,K; 82 E; 84 A; 93 G; 42 A; 91 G; 92 G

790036* (3544)	Sediment Dynamics Monitor (Ralph)	Heffler, DE	AGC	PS	-	Atlantic Offshore Arctic Offshore

Obj: To design, build and test an instrument to investigate the dynamics of sediments in water depths ranging from a few metres to 200 M for bottom durations of up to 45 days.

790038* (3521)	Devonian Rocks in east-Central B.C. and west-central Alberta	Geldsetzer, HHJ	ISPG	RG	M	BC Alta

Obj: To establish and apply conceptual models of deposition of the original sediments in terms of environment and paleogeography, their subsequent diagenesis and correlation.

NTS: 83 C; 84 E,L; 93 H,I;

790041* (3511)	Lardeau map-area, B.C.	Wheeler, JO	C	-	CMG	BC

Obj: To complete terminal report and related geological, structural and mineral deposits maps and structure sections for publication at 1:250,000 scale.

NTS: 82 K,M,N

790042 (359)	Stratigraphy, structure and Tectonics; Innuitian Fold Belt, Ellesmere Island, N.W.T.	Okulitch, AV	DGO	-	SP	Frank

Obj: To map and describe structures of the southernmost part of the fold belt, their evolution and the tectonic history of that part of the belt on Ellesmere Island.

NTS: 49 A,B,C

800001* (3552)	Quaternary geology and terrain inventory, Nahanni-Sheldon Lake-Finlayson Lake	Jackson, LE	TS	QG	-	Yk Mack

Obj: To map, describe and explain the surficial deposits, terrain conditions, active geomorphic processes and Quaternary history with specific reference to the significance of Quaternary geology for mineral exploration.

NTS: 105 I,J(S½),G,K,F

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
800005 (3531)	Metamorphism and structure in northeast Superior Province	Ciesielski, A	LCS	-	SG	Que

Obj: 1. To understand the geological evolution of the higher grade metamorphic region of the northeastern Superior Province, and in particular, the relationship between greenstone and granulite terrains.
2. To contribute, through field studies, to compilation of a geological map at 1:1,000,000 scale for NTS 33.

NTS: 33

800006 (3531)	Geology of Beechey-Duggan Lakes area	Frith, RA	LCS	-	BS	Mack

Obj: 1. Map for 1:250,000 published scale.
2. Understand the nature of the Thelon Front.
3. Produce final maps and a report.

NTS: Pts 76 F,G,H; 86 B

800007* (3531)	Metamorphism in the Kisseynew Subprovince	Froese, E	LCS	-	PET	Man Sask

Obj: To study the metamorphic zonation in the Kisseynew Subprovince, from the low grade margin to the granulite facies in the centre, and to determine its relationship to the development of alternating volcanic and sedimentary subprovinces.

NTS: Pts 76 F,G,H; 86 B; 63 J,K,N,O

800008 (3531)	Geology of the Baker Lake map-area	Schau, M	LCS	-	NC	Kee

Obj: To refine and upgrade the 16-mile reconnaissance, with emphasis on the structure and stratigraphy of Archean metavolcanics and Aphebian(?) metasediments, and relationship to gneissic and granitic rocks. The economic potential will be evaluated.

NTS: 56 D

800009 (3531)	Geology of Fort Smith, District of Mackenzie	Bostock, HH	LCS	-	BS	Mack

Obj: To complete mapping of Precambrian rocks at 1:250,000 scale in Fort Smith (75 D) and east part of Little Buffalo River (85 A).

NTS: 75 D, E½, 85 A(E½)

800010 (3512)	Marine magnetic surveys	Currie, RG	C	-	MG	Pacific Offshore

Obj: To measure and interpret the earth's magnetic field over a poorly surveyed portion of the northeast Pacific to facilitate a reconstruction of the tectonic history of the Canadian margin in the period 10-50 Ma.

800012 (3531)	Geology of Woodburn Lake map area, District of Keewatin	Fraser, JA	LCS	-	NC	Kee

Obj: To upgrade the 16-mile geological reconnaissance survey made in 1953, in particular to refine interpretations of the stratigraphy and structure of the Proterozoic(?) supracrustal rocks, and to determine their relationship to the granitic basement. To assess the economic potential of the area.

NTS: 56 E

800013 (3532)	Vertical Movements of the Precambrian Shield	Buchan, KL	LCS	-	PMag	Ont Que

Obj: To determine vertical movements for structural provinces in the Precambrian Shield from remanent magnetism. The method is quantitative and would allow estimating the net amount of uplift or tilting of the Shield since the Archean.

NTS: 23; 24; 34 C

800014 (3531)	Metamorphism of volcanic rocks, Crowduck Bay, Manitoba	Gordon, TM	LCS	-	PET	Man

Obj: Conduct a detailed field and petrologic study of a belt of volcanic and associated sedimentary rocks in order to provide correlation criteria for mapping amphibolites and gneisses equivalent to volcanic belts and elucidate the chemical processes which limit the economic potential of metamorphic rocks.

NTS: 63 J,K,N,O,P; 64 A,B,C

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
800015 (3542)	Coastal Morphology and Sediment Dynamics, Southeast and East Cape Breton Island, N.S.	Taylor, RB	AGC	SG	CGD	NS

Obj: 1. To provide a map of shoreline features and sediment along SE and E Cape Breton Island.
2. To examine two well developed barrier beaches with different aspect, geological setting and sediment availability in order to determine seasonal changes in beach-nearshore morphology and sediment characteristics and to document the historic changes and response of these beaches to changing environmental conditions.

NTS: 11 F,G,K

800018* (3572)	High Resolution Seismic (Equipment Development)	Pullan, SE	MR	EGP	TG	Ont Que Man Alta BC Sask Yk NS

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. To develop new techniques for use with the engineering seismograph.
2. To improve the reflection seismic resolution of shallow seismographs and test these improvements at various sites in Canada.

NTS: 40 I,P; 30 M; 84 A; 93 G; 73 B; 83 G; 31 G; 11 E; 82 L

800019 (3551)	Surficial geology, Cobden area (Quebec part)	Fulton, RJ	TS	QG	-	Que

Obj: To map, describe and explain the unconsolidated deposits and landforms of the Quebec part of the Cobden area (31 G 10) in order to provide geology and terrain information pertinent to agriculture, urban and industrial development and engineering construction and to determine the Quaternary history of the region.

NTS: 31 G 10 (Quebec part)

800020* (3542)	The Recent Paleoclimatic and Paleoecologic Records in Fjord Sediments	Schafer, CT	AGC	EMG	P	Que BC

Obj: To relate documented climatic excursions that have occurred over the past several centuries to the geological record in unbioturbated fjord sediments recovered from distinctive climatic regimes throughout Canada with a view to the development of predictive models for climatic trends on a 3 to 10-year scale.

NTS: 22; 2; 3; 11; 12

800022* (3511)	Stratigraphy and structure of Dawson, Larsen Creek and Nash Creek map areas	Thompson, RI	C	-	CMG	Yk

Obj: To update the 1:250,000 geologic maps of Dawson, Larsen Creek and Nash Creek as a framework for the stratigraphic and structural analysis of the region and its bearing on the geological evolution of the northern Cordillera.

NTS: 116 A,B,C; 106 D

800023 (3571)	Special assignments on eastern and northern Canada	Poole, WH	MR	EG	SP	Que NB NS Nfld

Obj: To contribute to the mineral resource data base and the evaluation of regional resources.

800024 (3551)	Quaternary geology-terrain inventory, northwestern Manitoba	Dredge, LA	TS	QG	-	Man

Obj: Map, describe and explain the surficial materials and landforms, thermal conditions and active processes to provide knowledge of stratigraphy, age and Quaternary history and areal geologic data with particular reference to engineering construction and mineral exploration.

NTS: 64 J,K,N,O

800027 (3552)	Sensitivity of surficial sediments to effects of acid precipitation	Kettles, IM	TS	QG	-	Ont Que NB

Obj: 1. To establish baseline data on natural variations of buffering capacities of surficial sediments, with respect to possible loading by acid precipitation in an area of predominantly non-carbonate bedrock.
2. To establish magnitude of natural areal variation of chemical (trace and minor element) components that might be mobilized by loading by acid precipitation.
3. To determine the extent that glacial dispersal has modified the physical and chemical properties of surficial sediments from those that would be expected based on bedrock lithologies alone.

NTS: 31 B,C,D,E,F,G,K,L; 21 J,N,O; 41 A,H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
800028* (3511)	Eastern Margin of the Coast Plutonic Complex	Woodsworth, GJ	C	-	CMG	BC

Obj: 1. To examine the stratigraphy, structure, and plutonism of the eastern Coast Plutonic Complex and to correlate metamorphic rocks with unmetamorphosed rocks to the east.
2. To produce reports and geologic maps of Bella Coola (93 D), Terrace (103 I), Pemberton (92 J) and Nass River (103 O) map-areas.

NTS: 92 J,N; 93 D; 103 H,I,J,P

800029* (3511)	Geology of the Ashcroft and Hope map-areas	Monger, JWH	C	-	CMG	BC

Obj: To produce Geological maps of Ashcroft (92 I) and Hope (92 H) map-areas.

NTS: 92 I,H

800030* (3574)	Isotopic Geochemistry, Precambrian Mineralized Basins	Cameron, EM	MR	EGC	-	Mack Ont Que

Obj: 1. Provide data on the distributions of certain isotopic ratios within mineralized Precambrian basins.
2. Utilize these data to interpret the mineralizing processes.
3. Develop methods of geochemical exploration for mineral deposits in these basins based on the findings of (a) and (b).

NTS: 42 C; 52 A; 41 I,J,K,P; 86

800031 (3521)	Geological reconnaissance, southeastern margin of Franklinian Geosyncline	Christie, RL	ISPG	RG	AI	Frank

Obj: To improve understanding of the sedimentation and paleogeography of the Franklinian Geosyncline, particularly late Precambrian to lower Paleozoic stratigraphy; to provide better understanding of late Precambrian to Silurian events along the platform and platform-miogeosyncline junction along the edge of the Franklinian Geosyncline.

800033 (359)	Geology and Economic Minerals of Canada 6th Edition	Wheeler, JO	DGO	-	-	-

Obj: To coordinate the preparation of a new edition of Geology and Economic Minerals of Canada and related charts and thematic maps for publication by the end of 1988.

800034 (3541)	Rift Processes and the Development of Passive Continental Margins	Keen, CE	AGC	RR	-	Atlantic Offshore Arctic Offshore

Obj: To investigate consequences (i.e. subsidence history, stratigraphy, crustal thicknesses, heat flow, and gravity anomalies) of various processes perhaps responsible for initial rifting. These processes include extension, intrusion, erosion and phase changes in the lower crust. Models of the processes allow predictions of the above observations which can be compared to real data. This allows elimination of models which do not fit the observations and hopefully will lead to a better geological model of the rift processes.

800035* (3541)	Seismic studies of continental margins and ocean basins of the North Atlantic	Reid, I	AGC	RR	OBM	Atlantic Offshore

Obj: To study the deep crustal structure of passive continental margins. To combine seismic with other geological and geophysical data to infer the detailed geology across the ocean/continent boundary. By application to a variety of margins, to relate the geological structure to models of continental margin evolution.

800036* (3542)	Stability and Transport of Sediments on Continental Shelves	Amos, CL	AGC	EMG	SG	Atlantic Offshore

Obj: The scientific objectives of this project are:
1. to determine the sediment stability under waves and currents on continental shelves, because of a serious lack of experimental data in this highly-disputed field;
2. to apply the above predictively to problems related to ice scouring of seabeds, offshore oil production activities, the differentiation of modern and relict features and the dispersal of materials across the continental shelf;
3. to develop a generalized, programmed strategy for application by other users to solve similar problems of sediment stability at other shelf sites.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810003* (3573)	Evaluation of Two Deep Sounding E.M. Systems	Sinha, AK	MR	EGP	TG	NS Nfld Que Ont Sask Man Mack

Obj: 1. To evaluate and demonstrate the effectiveness of two deep sounding electromagnetic (E.M.) systems, Maxi-probe and Geonics EM-37, for geological mapping (e.g. permafrost) and mineral exploration (e.g. base metals and uranium) purposes.
2. To compare these two systems with other inductive sounding/mapping systems.
3. To develop techniques for the interpretation of field data from these two systems and to establish new techniques for electrical exploration at large depths.

NTS: 31 D,G; 41 A; 40 P; 107 C; 64 C; 71 I,N,O; 30 M; 21 A; 42 A; 32 F; 11 F

810004 (3551)	Quaternary geology – terrain inventory, Frances Lake	Dyke, AS	TS	QG	-	Yk

Obj: To map, describe and explain the landforms and Quaternary deposits in order to understand the Quaternary evolution of the area and to provide information relevant to land-use planning and mineral information.

NTS: 105 H

810005 (3552)	Relationship of flood frequency and heavy metal uptake in growth rings of trees	Egginton, PA	TS	TD	GPEG	Ont Mack

Obj: To develop and evaluate a proxy method of determining flood frequency of rivers.

NTS: 31 F,K,L; 42 H,P

810006* (3551)	Quaternary Geology, upper Fraser River Basin	Clague, JJ	TS	QG	-	BC

Obj: To describe, map and establish the stratigraphy of unconsolidated deposits in order to:
1. reconstruct the upper Fraser River drainage development as an aid to explaining the distribution of placer deposits,
2. provide information pertinent to forestry, land-use planning, urban and industrial development, and
3. to determine the Quaternary history of the region.

NTS: 93 A,B,G,H

810007 (3551)	Quaternary geology-terrain inventory, western Victoria Island	Vincent, JS	TS	QG	-	Frank

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, ground ice and organic cover, and undertake geomorphic process studies in order to provide areal knowledge of geology and terrain that will:
1. aid in the implementation of the Territorial Land Use Regulations;
2. be pertinent to engineering construction, petroleum exploration and related activities;
3. provide data relative to terrain sensitivity rating; and
4. elucidate the Quaternary history of the region.

NTS: 87 A,C,D,E,F,G,H; 88 A,B,C,D; Pts of 77 B,C,F,G; 78 B

810008 (3573)	Nuclear and Analytical Instrumentation	Bristow, Q	MR	EGP	IRD	Ont

Obj: Adaptation of advanced technology, and development of new technology (both in-house and under contract) for improved acquisition of conventional geophysical and geochemical data and for the measurement of other new parameters which are not at present generally measured. Publication of results and/or licencing of products for the rapid and effective transfer of technology to industry.

NTS: 31 C,F,K; 40 P

810009 (3573)	Remote Sensing Applications	Slaney, VR	MR	EGP	RG	-

Obj: 1. To maintain up-to-date a Landsat imagery file for the use of the GSC staff and to be in a position to advise geologists and others on the potentials and limitations of Landsat imagery in the solution of specific problems.
2. To develop and to demonstrate new methods or to adapt existing methods in relation with the task of integrating imagery (satellite and airborne) with geochemical, geophysical and geological data for the purpose of geological mapping and/or mineral exploration.
3. To evaluate geological applications of Synthetic Aperture Radar and to provide the Interdepartmental Committee on Space with requirements for RADARSAT project.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810010 (3521)	Detailed geological study of selected areas within the Foothills and Rocky Mountain Belts between Peace River and Smoky River with emphasis on structure	McMechan, ME	ISPG	RG	M	BC Alta

Obj: To map at 1:50,000 scale:
1. Northern area-map sheets 93 0/11, 12E, 14, and the parts of 93 0/13 E and 13 W east of Williston Lake.
2. Southern area-map sheets 83 L (S.W. corner), 83 E (N.W. corner) and in conjunction with R.I. Thompson parts of 93 I (SE corner) and 93 H (N.E. corner). As a data base for the preparation of structural interpretations across both areas, and the delineation of coal bearing sequences in the southern area.

NTS: 93 H(NE), I(SE), O/11-14; 83 E(NW), L(SW)

810011* (3521)	Carboniferous stratigraphy and sedimentology of east central British Columbia and west central Alberta	Richards, BC	ISPG	RG	M	BC Alta

Obj: 1. Revision of the stratigraphic nomenclature of subsurface and surface Carboniferous stratigraphic units.
2. To solve subsurface and surface stratigraphic problems.
3. To determine the characteristics, distributions, and depositional environments of lithofacies in the surface and outcrop belt.
4. To summarize region's Carboniferous depositional and tectonic histories.
5. Evaluation of hydrocarbon potential.

NTS: 83 E,F,G,L,K,J,M,N,O; 93 I,J,O,P; 94 A,B,G,H,I,J,K,N,O,P; 82 O,J

810012 (3521)	Structural and stratigraphic studies of Northeast British Columbia	Taylor, GC	ISPG	PRAS	-	BC

Obj: To provide a synthesis of the geology of the northern Rocky Mountains in terms of the tectonic response of the stratigraphic record.

NTS: 93 I,O,P; 94 F,G,J,N,O

810013 (3521)	Syntheses of Mesozoic and Cenozoic rocks of Eastern Cordillera and Plains	Stott, DF	ISPG	RG	M	Man Sask Mack Alta BC Yk

Obj: To provide regional syntheses, including maps and correlations concerning sedimentary sequences, particularly of Mesozoic clastic sequences in Western Canada.

810014* (3524)	Resource evaluation and geology of Canada's coal deposits	Hughes, JD	ISPG	CG	RE	BC Alta Sask

Obj: To conduct resource evaluation programs required for the National Coal Inventory and to recommend the office and/or field studies to be undertaken to meet the requirements of the inventory program. To acquire industry and provincial government data on Canada's coal deposits. To study the geological framework within which these coals occur. To provide authoritative advice to senior Departmental officials and to scientists in government and industry on the resource potential of Canada's coal deposits. To maintain an up-to-date knowledge of coal fields in Canada.

NTS: 83 A,G,H,I,J; 93 O,P; 72 F,G,H; 62 E; 82 G

810017 (3521)	Middle and Upper Devonian rocks in the subsurface of west-central Alberta	Meijer-Drees, NC	ISPG	RG	M	Alta

Obj: To establish the depositional environment and paleogeography of the original sediments and their subsequent diagenesis for the purpose of correlating the depositional framework (sedimentological history) with that of the Middle and Upper Devonian sediments in the Rocky Mountains to the west investigated under Project 790038.

NTS: 83 B,C,E-G,J-N

810018 (3524)	Regional Coal Rank Variations in the Kootenay Formation and their relationship to the structural history of the Southern Canadian Rocky Mountains	Cameron, AR	ISPG	CG	CT	BC Alta

Obj: 1. To delineate vertical and lateral coal rank variation (by vitrinite reflectance) in the Kootenay Formation of the southern Rocky Mountains and Foothills.
2. To utilize this and stratigraphic/structural data to interpret the relative timing of deformation and the relative contribution to total loading of structural and sedimentological components.

NTS: 82 G,J

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810019* (3524)	Regional coalification studies in the Minnes, Bullhead and Fort St. John Groups, N.E. British Columbia	Kalkreuth, W	ISPG	CG	CT	BC Alta
	Obj: 1. To determine the regional coalification pattern of the lower Cretaceous Bullhead, Fort St. John and Minnes Groups in the foothills belt of northeastern British Columbia and west central Alberta. 2. To determine the petrographic composition of coal seams in the region to provide further data on coal quality and utilization and on depositional environments of seam formation. 3. Coal rank data and petrographic profiles of seams will contribute to stratigraphic correlations.					
	NTS: 83 E; 93 I,P					
810020 (3531)	Thrust-Fold Belt of Wopmay Orogen – Internal Zone	St-Onge, MR	LCS	-	BS	Mack
	Obj: To extend the study of metamorphism, plutonism and structure resulting from collisional orogeny affecting an early Proterozoic continental margin.					
	NTS: 86 E,F,G					
810021* (3531)	Externides of Wopmay Orogen	Hoffman, PF	LCS	-	BS	Mack
	Obj: To extend the stratigraphic and structural study of an early Proterozoic passive continental margin and its destruction by collisional orogeny.					
	NTS: 86 H,I,J,M,O,P; 76 J,K,M					
810022 (3552)	Permafrost and ground ice map of Canada	Heginbottom, JA	TS	TD	-	Yk Mack
	Obj: To compile a revised permafrost and ground ice map of Canada at a scale of 1:5M.					
	NTS: 106; 107; 116					
810023 (3551)	Quaternary geologic compilation (EG-1 revision)	Fulton, RJ	TS	QG	-	-
	Obj: 1. Prepare a volume describing the Quaternary geology of Canada. 2. Prepare a map depicting the surficial materials of Canada at a scale of 1:5 000 000.					
810024* (3571)	Metallogeny of the Baker Lake-Thelon region, N.W.T.	Miller, AR	MR	MD	RMS	Kee
	Obj: To determine the relationship of uranium and other mineralization to intrusive and extrusive igneous activity, metamorphism and sedimentary processes in the Archean basement and overlying Aphebian and Helikian rocks in the Baker Lake-Thelon region.					
	NTS: 66 A; 56 D,E,J; 65 I,J; 55 M					
810025 (3571)	Organization and preparation of mineral resources component of Economic Geology Series Volume 1 – 6th Edition	Thorpe, RI	MR	MD	MDG	-
	Obj: To produce descriptive-interpretative accounts of the mineral deposits of Canada, integrated as appropriate with the regional geological accounts, and to produce summaries of deposit types, metallogenic syntheses and inter-regional comparisons of the character and distribution of mineral resources.					
810028* (3511)	Conodont biostratigraphy and biogeography in the Canadian Cordillera	Orchard, MJ	C	-	CMG	BC Yk
	Obj: To collect and document conodont faunas and associated biotas to provide and refine a biostratigraphic framework for the interpretation of Cordilleran geological evolution.					
810029 (3511)	Micropaleontological analysis of referred samples	Orchard, MJ	C	CMG	-	BC Yk
	Obj: To provide microfossil-based relative ages to Cordilleran geologists for their use in the solution of geological problems.					
810031 (3541)	Evaluation of KSS-30 Sea Gravimeter	Loncarevic, BD	AGC	RR	OBM	Atlantic Offshore
	Obj: To acquire, field test, and implement operational use of the new sea gravimeter (Model KSS-30).					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810032 (3543)	D.S.D.P. Dinoflagellates	Bujak, JP	AGC	EPG	-	Atlantic Offshore

Obj: Establish a dinoflagellate zonation scheme for the Upper Cretaceous-Cenozoic of the Atlantic. Describe new taxonomy where relevant. Correlate and date this scheme relative to the standard plankton microfossil zonations and Circum-Atlantic onshore stratotypes. Determine stratigraphic-regional distribution of taxa and paleo-environmental/altitude significance of these distributions relative to the history of the Atlantic and related areas. Assess hydrocarbon source potential of sediments beneath the Atlantic using visual kerogen analysis techniques.

810033 (3543)	Biostratigraphy of the Atlantic Shelf and Relevant Areas	Fensome, RA	AGC	EPG	-	Atlantic Offshore

Obj:
1. To analyze palynologically Canadian east coast offshore wells, to apply and refine the already developed palynozonation and to furnish a detailed chronostratigraphic framework for the Mesozoic-Cenozoic strata of offshore eastern Canada.
2. To analyze palynologically Mesozoic-Cenozoic assemblages from other relevant areas as a control for Canadian east coast studies.
3. To develop data bases, including BIOSTRAT, to facilitate refinement of zonations through quantitative biostratigraphic techniques.

810034* (3543)	Maturation Studies	Bell, JS	AGC	EPG	-	Atlantic Offshore

Obj: Determination of organic maturation of the stratigraphic sequences penetrated by selected east coast wells with the aim of establishing time/space relationships for hydrocarbon generation.

810035 (3543)	Taxonomy, Phylogeny and Ecology of Palynomorphs	Fensome, RA	AGC	EPG	-	-

Obj: Taxonomy: To publish formal descriptions of palynomorph assemblages from offshore eastern Canada and other relevant areas. Phylogeny: To resolve and describe phylogenies amongst palynomorphs in order to improve knowledge of the biological groups concerned, their biostratigraphic resolution and their suprageneric classification. Ecology. To assess the paleoecology and plot provincialism of palynomorphs and thus aid the understanding of the paleoenvironmental history of the areas studied.

810036* (3542)	Morphology, sedimentology, and dynamics of Newfoundland coast	Forbes, DL	AGC	EMG	SG	Nfld

Obj:
1. To describe and interpret the geomorphology, sedimentary materials, and stability of the Newfoundland coast, with attention to problems of coastal resource management and oil-spill contingency planning.
2. To investigate the sedimentary facies and physical processes characteristic of selected coastal types and, in particular, of gravel barrier and associated lagoon systems, for which little information is available.

NTS: 1 K,L,M,N; 2 C,D,E,F,M; 11 O,P; 12 A,B,G,H,I,M,P

810037* (3541)	Surficial geology, geomorphology, and glaciology of the Labrador Shelf	Josenhans, HW	AGC	RR	EAOG	Atlantic Offshore

Obj: To gain an understanding of the post glacial sedimentary processes, hydrodynamic regime and iceberg dynamics across the Labrador Shelf; to define the style of glaciation across the shelf; to relate these findings to world wide glacial events; to determine the paleoceanography of the Labrador Sea; to map the surficial geology of the region between Hamilton and Saglek Banks; to assist the offshore industry by providing regional geological data and up-to-date synthesis; to determine the existence and density of seabed hazards.

NTS: 3; 13; 14; 15; 25

810038 (3522)	Palynology of Carboniferous, Permian and Triassic Rocks of northern and western Canada	Utting, J	ISPG	P	MiP	Frank Que NS PEI Nfld NB Mack Yk BC Alta Sask

Obj:
1. To establish a palynological zonation for Carboniferous, Permian and Triassic rocks of northern and western Canada and to apply this zonation to local, regional and worldwide biostratigraphic correlations.
2. Taxonomic description of palynological taxa to provide bench marks substantiating the zonation.
3. Completion of related studies on Carboniferous rocks in eastern Canada previously initiated by J. Utting before joining the Survey.

NTS: 560 A,D; 340 A,B,C,D; 59 E,H; 49 E,F,G,H; 78 G; 79 B; 88 H; 89 A

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
810039* (3524)	Sedimentological studies of coal-bearing Upper Cretaceous and Paleocene formations, Alberta Foothills and Plains	Jerzykiewicz, T	ISPG	CG	CG	Alta
	Obj: Establish the stratigraphic and sedimentological framework of Upper Cretaceous and Paleocene formations in the Foothills of Alberta as a basis for evaluation of their coal resource potential. Provide a geological base for the stratigraphic correlation between the coal bearing deposits in the Foothills and those of the Plains.					
	NTS: Pts 83 A,C; 82 G,H,J,O,P					
810041 (3542)	The physical behaviour of suspended particulate matter (spm) in natural aqueous environments	Syvitski, JPM	AGC	EMG	SG	Atlantic Offshore Arctic Offshore Pacific Offshore
	Obj: To discover the physical forms and dynamic behaviour of spm so that the vertical flux of spm can be understood for a variety of environments.					
	NTS: 21; 11					
810042* (3542)	Sedimentology of Fjords	Syvitski, JPM	AGC	EMG	SG	Que Frank
	Obj: To complete a comprehensive study on the climatology, hydrography, physical oceanography, sediment dynamics, sedimentological history, and animal sediment relationships of west coast fjords (completion of previous NSERC project) and Arctic fjords.					
	NTS: 22					
810043* (3573)	Pore structure in crystalline [illegible]	Katsube, TJ	MR	EGP	-	Man Ont
	Obj: To develop methods to determine pore structure and radionuclide isolation capacity of various types of crystalline rocks. To apply these methods on rock samples from Pinawa, Chalk River, Atikokan and other Nuclear Fuel Waste Research areas.					
	NTS: 52 B,L; 41 J; 31 K					
810044* (3551)	Quaternary geology-terrain inventory, Prince of Wales Island, King William Island and adjacent mainland Keewatin	Dyke, AS	TS	QG	-	Frank Kee
	Obj: To map, describe and explain the Quaternary deposits and landforms in order to understand the Quaternary evolution of the area and to provide information relevant to land-use planning and mineral exploration.					
	NTS: 66 O,P; 57 B,C; 67 A,D,H; 68 A-D					
810045 (3541)	An Earth Science Atlas of the Continental Margin of Eastern Canada	Srivastava, SP	AGC	RR	EAOG	-
	Obj: To provide a means of releasing information generated or compiled by AGC in a standardized form suitable for regional studies.					
810047* (3542)	Quaternary geologic processes on Continental slopes	Piper, DJW	AGC	EMG	-	Atlantic Offshore
	Obj: To determine why different areas of continental slopes off Eastern Canada have such different surface morphology and surficial geology; to relate this variability to contemporary and Pleistocene processes and paleo-environmental configurations; and to thus develop predictions on subsurface surficial sediment distribution and slope stability and the flux of sediment from the continental shelf to the deep sea.					
810048 (359)	Canada-Nova Scotia Cooperative Mineral Program 1981-84	Poole, WH	DGO	-	-	NS
	Obj. To ensure that the Cooperative Mineral Program with Nova Scotia Department of Mines and Energy is properly designed and that the GSC component is properly managed and productive.					
820001 (3524)	Completion of outstanding Foothills mapping projects	Gibson, DW	ISPG	CG	CG	Alta
	Obj: Supervise contract to prepare for final publication geological maps and reports on Blairmore (82G/9), Carbondale River (82G/8), Livingstone River (82J/1) and Beehive Mountain (82J/2) areas in the Foothills of southwestern Alberta.					
	NTS: 82 G,J					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
820003 (3541)	Geology of the Atlantic Margin: Canada	Williams, GL	AGC	RR	-	Atlantic Offshore

Obj: Preparation of a volume with the above title as a contribution to a 25 volume series on the geology of North America celebrating the decade of North American geology.

820004* (3531)	Geology of Aberdeen Lake and parts of adjoining map areas, District of Keewatin	LeCheminant, AN	LCS	-	NC	Kee

Obj: To interpret the geology of the area to produce a 1:250,000 geological map that will contribute to a regional geological synthesis. Emphasis is to be placed on study of Proterozoic volcanic-plutonic complexes and the stratigraphic and sedimentologic history of the Thelon Formation.

NTS: 66 A,B,C,F,G; Pts 65 O,N

820005* (3532)	Paleomagnetism of Nipissing diabase and Abitibi dykes.	Buchan, KL	LCS	-	PMag	Ont Que

Obj: To study the magnetic characteristics of the Nipissing diabase and Abitibi dykes and the rocks which they intrude in order to establish the relative ages of observed paleomagnetic components.

NTS: 31; 32; 41; 42

820006 (3531)	Regional Geological Synthesis, Western Superior Province	Percival, JA	LCS	-	SG	Ont Man

Obj: To compile and synthesize, in the form of maps and reports, all geological work to date in NTS 52. To outline areas requiring more coverage or update and to evaluate potential problem-oriental studies in order to:
1. improve regional correlation;
2. improve understanding of Superior Province tectonics; and
3. to produce geological maps for publication at 1:1,000,000.

NTS: 52; 41

820007 (3531)	Deep Rose Lake and parts of adjoining map areas, District of Keewatin	Tella, S	LCS	-	NC	Kee

Obj: To map the bedrock geology at a scale of 1:250,000 in order to determine the tectonic and metamorphic history of the basement complex and that of the supracrustal rocks, and to assess the economic potential of the region. Emphases will be placed on the study of cataclastic to mylonitic zones in the region to determine their distribution and tectonic significance.

NTS: 66 B,F,G,H

820008 (3531)	Geology of Montresor River and Lower Hayes River map areas, District of Keewatin	Frisch, T	LCS	-	NC	Kee

Obj: The mapping of the supracrustal Chantrey Belt, its extensions and its environs at a scale of 1:250,000.

NTS: 66 I; Pts 66 P; 56 L,M,N

820009 (3531)	Hottah Terrane	Hildebrand, RS	LCS	-	BS	Mack

Obj: To identify and characterize rocks of the Hottah Terrane, establish their relation to the Great Bear Magmatic Zone, and interpret their role in the Tectonic Evolution of Wopmay Orogen.

NTS: 86 D,E

820010* (3531)	Precambrian Shield Volume "Decade of North American Geology"	Hoffman, PF	LCS	-	BS	Alta Sask Man Ont Que Nfld

Obj: To produce an up-to-date volume (approx. 300 printed pages), and geological and tectonic maps on the geology of the Canadian Precambrian Shield, (as part of a 20 volume work on the geology of North America – GSA centennial project).

NTS: Pts 24; 52; 62; 63; 13; 31; 32; 41; 42

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
820014* (3511)	Stratigraphy and tectonics of the western margin of the southern Omineca Belt	Struik, LC	C	-	CMG	BC

Obj: To determine the stratigraphy, age and correlation of the rocks in the area underlain by the Snowshoe Formation and therefrom determine the stratigraphic and structural history of the western margin of the southern Omineca Belt. To determine the relationship of the contact of Quesnel Terrane with eastern rocks where they are mainly Snowshoe Formation and the correlation of the mafic meta-igneous(?) rocks at that contact.

NTS: 93 A,H,G;

820015* (3511)	Geology of Sheldon Lake (105 J) and Tay River (105 K) map area, east central Yukon	Gordey, SP	C	-	-	Yk

Obj: To update geological mapping and understanding of stratigraphy and structure in Sheldon Lake (105 J) and Tay River (105 K) map areas. Available preliminary edition geologic maps lack details useful in mineral exploration. An attempt will be made to extend the stratigraphy defined to the east in Nahanni map area (105 I) into these areas.

NTS: 105 J,K,L,P

820016* (3511)	Geology of Skagway (104 M) map-area, British Columbia	Dodds, CJ	C	-	CMG	BC

Obj: To update geological mapping in Skagway (formerly Bennett) map-area.

NTS: 104 M

820017* (3512)	The Geology of the Strait of Georgia	Hamilton, TS	C	-	PMG	BC

Obj: To examine and describe the geology of the Georgia Depression including: structures, stratigraphy and sedimentology. To determine the relative importance of glaciomarine and tectonic processes in shaping the constituent basins particularly with respect to the late Cenozoic. To determine the tectonic sequence of events in the Strait of Georgia as they relate to the evolution of the western Canadian Continental margin.

NTS: 92 B,F,G,K

820018 (3512)	Volcanic Rocks of the Insular Belt and Adjacent Deep Ocean	Hamilton, TS	C	-	PMG	BC

Obj: To examine the volcanic sequences of the western Canadian Continental Margin and describe their: stratigraphy, physical forms and depositional/extrusive modes, age relationships with adjacent formations, petrography, mineralogy, geochemistry, petrology and genesis. To interpret the geologic significance and economic potential of each of the various volcanic units and their roles in the tectonic and geodynamic evolution of the region.

NTS: 103 B,C,F,G,I,K; 92 B,C,E,F,K,L; 102 I

820020 (359)	Federal Mineral Program in Newfoundland 1982-84	Poole, WH	DGO	-	-	Nfld

Obj: To ensure that the Federal Mineral Program in Newfoundland is properly designed and that the GSC component is properly managed and productive.

820021* (3573)	Borehole Geophysics Applications to Coal	Mwenifumbo, CJ	MR	EGP	BG	Ont NS Alta Nfld Man

CURRENT INFORMATION NOT AVAILABLE

Obj: To improve borehole methods for the detection and evaluation of coal.

NTS: 12 A; 11 D,F,K; 65 H; 52 I,O; 31 F-G

820023 (3573)	Operation CESAR	Overton, A	MR	EGP	TG	Arctic Offshore

CURRENT INFORMATION NOT AVAILABLE

Obj: To participate in a multidisciplinary Canadian Arctic geoscience expendition to investigation the nature and origin of the Alpha Ridge, a major subsea mountain range in the Polar Basin.

820024 (3567)	Magnetic Anomaly Maps of Canada	Dods, SD	G	A	GDP	-

Obj:
1. To produce a series of composite magnetic anomaly maps in colour at a scale of 1:1,000,000 to be issued by the Geological Survey of Canada.
2. To produce a 5th edition of a 1:5,000,000 composite magnetic anomaly map of Canada (1255A).
3. To compile a composite magnetic anomaly map of North America at a scale of 1:5,000,000.
4. To provide a bank of digital aeromagnetic data.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
820027 (3567)	Development of Regional Geophysical Data Processing and Interpretation Methods	Teskey, DJ	G	A	GDP	-

Obj: To adapt or develop, as required, techniques for compilation, display and interpretation of airborne geophysical data in order to advance the utility of the data for regional mapping.

820031 (3526)	Petroleum Resource Evaluation Interchange	Taylor, GC	ISPG	PRAS	-	-

Obj: To provide a firm basis for petroleum resource evaluation by the analysis of the geological setting and characteristics of hydrocarbon accumulations on a worldwide basis; by establishing and quantifying valid analogs applicable to Canadian basins; and by comparison of method and approaches to resource evaluation used by other governments.

820033 (3521)	Stratigraphy and Sedimentology of the Mannville Group, Southern Alberta	Banerjee, I	ISPG	PG	PR	Alta Sask BC

Obj:
1. Regional correlation of the Lower Cretaceous strata in southern Alberta.
2. Construction of a facies model for the Mannville Group from stratigraphic and sedimentological data.
3. Environmental reconstruction of the Mannville Group and delineation of the regional paleogeography of the period.

NTS: Pts 72; 73; 82; 83; 93

820035* (3522)	Upper Mesozoic and Cenozoic Palynology of western and northern Canada	McIntyre, DJ	ISPG	P	MiP	Yk Mack Frank Alta

Obj: To establish the biostratigraphic succession, areal distribution, ecologic significance and taxonomy of Upper Mesozoic and Cenozoic palynomorphs of western and northern Canada, with particular emphasis on Mackenzie Delta-Beaufort Sea area.

NTS: 82 O,J; 97 C; 107 B,D; 117 A; 106 M; 116 F,H,I,P; 95; 96; 105; 115; 49; 59; 69; 79; 89; 98; 99; 340; 560

820038* (3552)	Comparison of geotechnical and geophysical properties of arctic seabed sediments	Kurfurst, PJ	TS	TD	GPEG	Mack Frank Yk

Obj: Development of analytical techniques and models to permit prediction of geotechnical properties of seabed sediments to be made from available geophysical data, for the purpose of aiding safer development of the hydrocarbon resources of the Beaufort Sea area.

NTS: Pts 107 C; 117 D; 77 D

820039* (3552)	Drift prospecting, east-central Labrador	Klassen, RA	TS	QG	-	Nfld

Obj: To develop methods for determining the source of uraniferous boulders contained within or associated with glacial deposits.

NTS: 13 E,F,K,L,N; 14 D,L,M

820041 (3543)	Information Data Base, Offshore East Coast Wells	Williams, GL	AGC	EPG	-	Atlantic Offshore

Obj: To develop computer data base of all geographical, geological and engineering information on offshore east coast wells. To use the data base for handling queries by management on resources. To facilitate research by allowing comparison of data and directing the researcher to more sophisticated data bases.

820043* (3544)	Coastal Environments and Processes in the Canadian Arctic Archipelago	Taylor, RB	AGC	EMG	SG	Frank

Obj: To map and analyze the coastal environments of the Arctic Archipelago. To determine the frequency and magnitude of processes affecting coastline stability across the Arctic Islands. To provide information on the physical characteristics of shore types and the processes affecting coastal stability which will serve as background information for the evaluation of man's activities in the coastal zone and in case of an environmental emergency, e.g. oil spill.

NTS: 59 B,C; 69 A-D; 79 A-D

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
820044* (3542)	Quantitative Quaternary Paleoecology, Eastern Canada	Mudie, PJ	AGC	EMG	P	Atlantic Offshore

Obj: 1. To quantify the relationship between present microfossil assemblages and the climate/oceanography of the eastern Canadian margins.
2. To apply these quantitative data to analysis of past climatic and oceanographic conditions, e.g. Quaternary glacial-interglacial cycles.
3. To correlate the E. Canadian paleoecological records and relate them to models of global ocean-atmosphere interaction during the Quaternary.

820046* (3542)	Sediment Dynamics and Depositional Processes in the Coastal Zone	Forbes, DL	AGC	EMG	SD	NS NB PEI Alta BC

Obj: To further our understanding of the dynamics of sediment entrainment, transport, and deposition in the coastal zone; of the sedimentology of coastal deposits; and of long-term trends in the development of coastal sedimentary systems.

820048 (3524)	Maturity of dispersed organic materials in lower and middle Paleozoic rock, determined by optical and geochemical studies	Goodarzi, F	ISPG	CG	CT	-

Obj: 1. To determine optical and morphological character of dispersed organic materials (D.O.M.) in lower and middle Paleozoic rocks.
2. To examine vertical variation of D.O.M. in boreholes and determine the paleotemperature.
3. To classify the D.O.M. of Lower Paleozoic rocks.
4. To study the influence of a) time of burial (age), b) rate of subsidence (rate to heating), c) genera of specific D.O.M., d) petrological and sedimentological environment.

820050* (3542)	Near-Surface Geology of the Arctic Island Channels (NOGAP)	MacLean, B	AGC	EMG	-	Arctic Offshore

Obj: Through an integrated geological, geophysical and geotechnical research program to investigate and report on seabed geology of the Arctic island Channels, the nature and severity of geological constraints to development and contribute to development of technology related to these studies. Objectives include determination of:
1. Surficial sediment textures, distribution, thickness, geotechnical properties and other parameters in sufficiently many and varied areas as to have predictive capability elsewhere;
2. Litho-, bio- and chronostratigraphy of surficial sediments;
3. Principal contemporary sediment dispersal or modifying processes, e.g. ice scour, winnowing, slumping, faulting, permafrost;
4. Nature of near surface bedrock;
5. History of events and evolution of the channels;
6. Technology development for geoscience studies in ice covered waters.

NTS: 48 B-F; 58 A-G; 59 A-D; 68 A-H; 69 A-D; 78 H; 79 A-D

820051* (3571)	Metallogeny of marine environments, including active spreading ridges	Franklin, JM	MR	MD	RMS	Pacific Offshore

Obj: 1. In collaboration with other scientists to investigate and document seafloor sulphide and other metalliferous occurrences in Canadian waters, with particular emphasis on the Juan de Fuca-Explorer-Dellwood-Tuzo Wilson ridges and adjacent seafloors.
2. To conduct research on hydrothermal systems and products in seafloor environments and to assist in the design, coordination and implementation of Canadian research programs in these areas.

NTS: 91; 100; 101; 102

820052* (3571)	Metallogenic processes in sedimentary-diagenetic environments	Dunsmore, HE	MR	MD	MDG	Sask Man Alta BC

Obj: To understand how various commodities of economic interest are, or were, concentrated by sedimentary-diagenetic processes, particularly those operating in evaporitic environments. An understanding of these processes is necessary for development of metallogenic models applicable to mineral exploration and resources evaluation.

NTS: 53; 62; 72; 73; 82; 83

830001* (3542)	Permafrost Processes in Arctic Beaches	Taylor, RB	AGC	EMG	SG	Frank

Obj: To determine the thermal regime across Arctic beaches and the factors which affect it so that a numerical model can be designed to predict the depth of thaw using easily obtainable information, i.e. climatic data or sea water characteristics. Other objectives are to determine:
1. the effect of ice-bonded sediment on wave run-up, swash-backwash velocities and wave washover; and
2. the formation, extent and duration of various types of ice features in Arctic beaches including anchor ice.

NTS: 59 B,C; 69 A,D

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830002 (3541)	Seismicity Studies of the Eastern Canadian Margin	Reid, I	AGC	RR	OBM	Atlantic Offshore Arctic Offshore

Obj: To investigate the detailed microseismicity of the passive margin: the level of activity, its spatial and temporal distribution, source mechanisms. This will allow better estimates of lithospheric stress distribution and strain rates, and may tell us something about margin evolution as well as the causative mechanism, be it deglaciation or something else. Knowledge of and understanding the seismicity on the continental margin is of course particularly important in view of possible seismic hazard to offshore hydrocarbon activity.

830003 (3544)	Development and Implementation of Cable Handling and Maintenance Procedures	Manchester, KS	AGC	PS		-

Obj:
1. To investigate methods of cable handling and maintenance techniques known.
2. To develop a cable handling and maintenance program at AGC and implement it.
3. To acquire equipment necessary to efficiently carry out program.
4. To increase cable life by a factor of two or more, thereby saving money in the long run.

830005 (3523)	Geological Modelling of Thermal History and Basin Development	Stephenson, RA	ISPG	PG	PR	Alta BC Frank

Obj: To develop and refine techniques for the analysis of the subsidence histories, subsidence mechanisms and thermal histories of sedimentary basins. This is to be done with the view that wherever possible there will be augmentation of other projects by melding expertise. Involve industry. Involve lithoprobe investigators.

NTS: 83; 84; 93; 94

830006* (3532)	Isotopic age determinations and radiogenic trace element studies of rocks and minerals	van Breemen, O	LCS	-	G	Mack

Obj: To precisely establish the chronological order of rocks and events. To apply radiogenic isotope tracer studies to the characterization of rock units in order to further extend the criteria for mapping and to determine the origin of rocks. To aid in the search for economic deposits. To remain at the forefront of geochronological research.

NTS: 75 E,O,P; 76 A,B

830007* (3542)	Beaufort Sea Coast	Forbes, DL	AGC	EMG	SG	Yk Mack

Obj:
1. To determine and map the physical characteristics of the Beaufort Sea Coast.
2. To assess processes, sedimentary styles and rates of change in this distinctive coastal environment.
3. To assess the response of coastal systems in the Beaufort Sea to industrial activities such as aggregate extraction, and to provide a sound scientific foundation for regulatory practices and contingency planning in the Beaufort Sea coastal zone.

NTS: 97 C,F; 107 B,C,D,E; 117 A,C,D

830008* (3531)	Displacement History of Major Shear Zones in Western Churchill Province	Hanmer, S	LCS	-	SG	Mack Sask

Obj: To document displacement histories of selected portions of two major shear zones in Churchill Province: MacDonald-La Loche and Grease R.-Black L. zones. To provide structural framework for on-going regional mapping in Mackenzie and Keewatin Districts and north Saskatchewan and to permit re-interpretation of existing maps.

NTS: 85 H; 75 E,L; 74 P

830009* (3531)	Structural studies in the Grenville Province of Ontario and western Quebec	Hanmer, S	LCS	-	SG	Ont Que

Obj: To examine the strain characteristics of major structural boundaries within the Grenville Province of Ontario and western Quebec, in order to determine kinematic sense and significance of possible differential movements. To relate such kinematic data to current regional synthesis.

NTS: 31 E,F; 41

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830010 (3531)	Tinney Hills (76 J)-Overby Lake (76 I W½) map areas	Thompson, PH	LCS	-	BS	Mack

Obj: While mapping the geology of the Archean rocks at 1:250,000 scale emphasis will be placed on the petrogenesis and structure of gneissic and migmatitic rocks and on the age, location and significance of the Thelon Front tectonic zone, the boundary between the Slave and Churchill Structural Provinces.

NTS: 76 G,I,J; 66 L

830011 (3523)	Thermal History and Basin Evolution – Canadian Frontier Regions	Skibo, DN	ISPG	PG	PR	-

Obj: Using computer methods and measured organic maturation parameters, to integrate geological and thermal histories in order to better define the hydrocarbon generating potential in unexplored or partly explored sedimentary basins.

830014* (3532)	Metamorphic Processes in the Kisseynew Sedimentary Gneiss Belt	Gordon, TM	LCS	-	PET	Man Sask

Obj: To determine the pressure-temperature history of selected areas in the belt for comparison with modern tectonic models.

NTS: 63 J,K,N,O; 66 A,B,C,D

830015 (3552)	Engineering geology of Canada	Evans, SG	TS	TD	GPEG	-

Obj: To provide engineering geological advice and service as required to departments or agencies of the Government of Canada. To interpret the engineering geological significance and performance of various geological regions of Canada with respect to slope failures or other natural hazards. To assemble selected case histories of natural hazards and/or engineering projects to illustrate the engineering geology of Canada.

830016* (3552)	Landslide hazard in the Canadian Cordillera	Evans, SG	TS	TD	GPEG	BC Alta Yk Mack

Obj: 1. To document the occurrence of landslides in selected geological environments of the Cordillera.
2. To develop landslide mechanism models for slope hazard assessment in selected geological environments.

NTS: 82; 83; 92; 93; 94; 95; 96; 102; 103; 104; 105; 106; 114; 115; 116; 117

830017 (3551)	Surficial geology, north-central District of Mackenzie	St-Onge, DA	TS	QG	-	Mack

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, ground ice and organic cover, and undertake geomorphic process studies of the NE¼ and part of NW¼ of 86°N in order to provide areal knowledge of geology and terrain that will:
1. elucidate the Quaternary history of the region;
2. aid in the implementation of the Territorial Land Use Regulations;
3. be pertinent to engineering construction, hydrocarbon transportation and related activities; and
4. provide data relative to terrain sensitivity rating.

NTS: 86 F,G,H,I,J,K,N,O,P

830018* (3551)	Quaternary geology, south-western Victoria Island	Sharpe, DR	TS	QG	-	Frank Ont Que

Obj: To complete a systematic study of the Quaternary geology (Wollaston Peninsula) to determine the character, composition, age, origin and history of the Quaternary sediments and their respective landforms. To develop a more detailed understanding of sediment-landforms for evaluation and/or mapping of adjacent areas of Victoria Island (eastwards). To compare landform-sediment mapping techniques with reconnaissance and landsat mapping methods. To demonstrate application of these studies to land-use planning, engineering route selection, mineral exploration and environmental analysis.

NTS: 77 B,C,D,E,F; 67 B,C,F; Pts 87 A,B,C,D,E,F; 31 C,D,G; 40 P; 41 A

830019 (3551)	Quaternary stratigraphy of the Beaufort Coast, Yukon and District of Mackenzie	Vincent, JS	TS	QG	-	Mack Yk Frank

Obj: To confirm the lithostratigraphy of the extensive suite of Quaternary sediments exposed along the Beaufort Sea Coast. To collect further samples for sedimentological and paleoecological studies in order to understand depositional environments. To collect samples for geochronological studies in order to ascertain the age of the sediments. This will help elucidating the Quaternary history of the area, enable regional correlations to be made and provide essential information for the EG-1 compilation.

NTS: 97 I-P; 107 A-H; 117 A-H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830020* (3511)	Penticton map area 82 E	Tempelman-Kluit, DJ	C	-	CMG	BC

Obj: To study and map the geology of Penticton map-area and to produce a comprehensive report of the results, with progress reports and oral summaries as appropriate.

NTS: 82 E

830021 (3511)	The Cordilleran Orogen: Canadian Sector	Gabrielse, H	C	-	CMG	-

Obj: To produce a volume on the geology of the Canadian Cordillera dealing with its physiography, stratigraphy, structure, evolution, geophysical signature, mineral deposits and geology related energy resources. The volume will be one of 10 volumes on the geology of Canada as part of the Decade of North American Geology (DNAG) project sponsored by the Geological Society of America. It will also serve as part of Geology and Economic Minerals of Canada, 6th edition.

830022* (3552)	Periglacial processes, Canadian arctic	Egginton, PA	TS	TD	GPEG	Frank

Obj:
1. To evaluate the distribution and relative importance of periglacial processes.
2. To assess, on the basis of long-term observation and measurement the characteristics, rates and effects on the terrain of periglacial processes.
3. To provide a national basis for evaluating natural and man-made hazards in the arctic environments.

NTS: 77 D

830023 (3551)	Quaternary history and surficial materials of northwestern Baffin Island	Dyke, AS	TS	QG	-	Frank

Obj: To map, describe, and explain the Quaternary deposits and landforms in order to understand the Quaternary evolution of the area and to provide information relevant to land-use planning and mineral exploration.

NTS: 47 F,G; 48 B,C; 57 E,H; 58 A,D

830024* (3551)	Quaternary geology, southwestern Saskatchewan	Klassen, RW	TS	QG	-	Sask Alta

Obj: To establish the Quaternary lithostratigraphy and to describe and map the surface deposits in order to: establish criteria for recognizing units of different ages occurring at the surface; determine the probable location and extent of potential aquifers; and outline the distribution of materials derived from different sources and deposited at different times. The data obtained are critical to understanding the distribution and nature of soil parent material, to resolving long-standing controversies about the extent of glaciation at different times and to further defining the Quaternary framework as an aid to future studies and mapping in southern Saskatchewan.

NTS: 72 F,G,J,K,E,L; 82 H

830025* (3552)	Quaternary stratigraphy, northern Ontario Lowlands	Shilts, WW	TS	-	SR	Ont

Obj:
1. To provide a basis for interpretation of the Quaternary history of the northern Ontario lowlands and adjacent regions.
2. To provide a means for assessment of the geology and economic potential of bedrock beneath an extensive drift-covered area.

NTS: 53 G,H,I,J,P; 43 B,F,L,K,N; 54 A

830026* (3533)	Geophysical Interpretation Abitibi Belt	Schwarz, EJ	LCS	-	LG	Ont Que

Obj:
1. To deduce the general (deep) crustal structure of the Abitibi Belt using geophysical and geological data.
2. To interpret these data in terms of intra-belt structures with particular attention to the continuation and extent of known zones or contacts favourable to metal concentration.

NTS: 32; 42; 52

830027* (3524)	Petrographic Analyses of coals in the Saunders Group, Outer Foothills Belt, Alberta	Cameron, AR	ISPG	CG	CT	Alta

Obj:
1. Determine petrographic character of these coals and establish vertical and lateral changes in petrography.
2. Determination of rank.
3. Investigate possible correlation between petrography and rank changes with sedimentological studies of Jerzykiewicz.

NTS: 82 P; 83 A,F,G

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830028* (3552)	Properties and distribution of permafrost and ground ice	Heginbottom, JA	TS	TD	-	Mack Frank Yk BC Alta

Obj: To provide information on the distribution, classification and properties of frozen soil and ground ice and their dynamic performance when disturbed.

NTS: 107 C; 96; 95; 85; 84; 94 J,K

830029 (3531)	1:1 000 000 Map – western area of south Baffin Island	Taylor, FC	LCS	-	SP	Frank

Obj: To compile a 1:1 000 000 scale map of NTS 36 – to form part of the 1:1 000 000 series of maps.

NTS: 36

830038 (3571)	Geomathematical applications the integration of geoscience in map data	Bonham-Carter, GF	MR	EG	MAG	Yk

Obj: To integrate diverse types of map information: geological maps (incl. structure and stratigraphy), geophysical maps (aeromag., gravity, radiometric surveys), geochemical surveys (stream and lake surveys), satellite imagery (Landsat MSS digital data), mineral occurrences (from CANMINDEX and elsewhere). To develop and refine methods for quantitatively comparing and integrating map data from diverse sources.

NTS: 105 I

830041* (3572)	Research and Development on the Analytical Methodology of Geological Materials	Gregoire, DC	MR	MC	C	Pacific Offshore

Obj: To provide for the analytical chemistry research and development requirements consistent with the aims of the GSC.

830042 (3522)	Carboniferous and Permian biostratigraphy and conodont faunas, western and northern Canada	Bamber, EW	ISPG	P	MiP	Alta Sask Frank

Obj: To establish the biostratigraphic succession, areal distribution, paleoecological significance, and taxonomy of upper Paleozoic conodonts, scolecodonts, and other selected microfossils of western and northern Canada, with particular emphasis on the Western Canada Sedimentary Basin and the Sverdrup Basin; to utilize microfossils as indicators of hydrocarbon maturation levels in host rocks.

NTS: 82 G,H,J,O; 78 G; 79 B; 62 K,L

830043 (3524)	Resource Evaluation and Geology of Coal Deposits of western and northern Canada	Smith, GG	ISPG	CG	-	Alta Sask

Obj: To conduct resource evaluation programs required for the National Coal Inventory and to recommend the office and/or field studies to be undertaken to meet the requirements of the inventory program. To acquire industry and provincial government data on Canada's coal deposits. To study the geological framework within which these coals occur. To provide authoritative advice to senior Departmental officials and to scientists in government and industry on the resource potential of Canada's coal deposits. To maintain an up-to-date knowledge of coal fields in Canada.

NTS: 72 M,G,H; 62 E

830045 (3542)	Quaternary Biostratigraphic Methods for Marine Sediments	Vilks, G	AGC	EMG	P	Arctic Offshore Atlantic Offshore

Obj:
1. Develop foraminiferal biostratigraphy to establish relative ages of Quaternary marine sediments, particularly off eastern and Arctic Canada.
2. Integrate biostratigraphy with independent dating through C^{14}, O^{18} and amino acid analyses and paleomagnetic profiles of sediments.
3. Provide paleontologic sediment dating services to other Quaternary projects whenever appropriate.

830050 (3574)	Geochemical exploration technology in ultrabasic complexes	Maurice, YT	MR	EGC	GMR	Ont Que

Obj:
1. To determine the favourability of ultrabasic complexes of various types throughout Canada to host Cu-Ni sulphides, platinum-group elements, chromite, and gold and silver deposits.
2. To develop and refine geochemical exploration methods for these metals in different environments.
3. To improve on the existing data base of platinum-group elements and other metals in various types of basic and ultrabasic rocks.

NTS: 21 L; 52 H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
830051 (359)	Geological Atlas of Canada	Okulitch, AV	DGO	-	SP	BC Alta

Obj: To plan and organize the preparation of the Geological Atlas of Canada, which consists of a factual synthesis of the bedrock geology of Canada displayed in a series of 1:1 million scale maps accompanied by correlation charts, cross sections, interpretive maps or diagrams, etc., as appropriate.

NTS: Pts 82 H,L

830052* (3552)	Norman Wells pipeline – performance monitoring	Harry, DG	TS	TD	GPEG	Mack Alta

Obj: To examine the actual impact of the construction and initial operation of the proposed Norman Wells Pipeline upon the geological environment of the upper Mackenzie Valley; to assess the accuracy of predictions of impacts made during the assessment review phase for the pipeline; and to assess the quality of the surficial geology and terrain sensitivity maps of the upper Mackenzie Valley.

NTS: Pts of 84; 85; 94; 95; 96

830053* (3544)	Data Inventory	Hardy, I	AGC	PS	-	-

Obj:
1. To provide an inventory of all data collections in AGC.
2. To analyze existing forms of data release and suggest new or improved methods.
3. To compile information on the status of surveys on coastal and offshore Eastern Canada and to prepare reports annually.

830054 (359)	Gaspé-Lower St. Lawrence Geoscience Program	Maurice, YT	DGO	-	-	Que

Obj:
1. To coordinate the program of geoscientific studies under the Gaspé-Lower St. Lawrence initiative and to assist GSC Divisions in planning and delivery of the work, and to monitor progress.
2. To develop and maintain appropriate contacts outside of GSC; to advise GSC management about factors affecting the program; to prepare such reports and other information as may be required by the Department and Central Agencies.

NTS: 21 M,N,O; 22 A,B,C,G,H

830055* (3542)	Facies Models of Modern Turbidites	Piper, DJW	AGC	EMG	-	Atlantic Offshore

Obj: To contribute information on modern turbidite to OERD-ISPG project on facies models for reservoirs in deep water sediments, in particular establishing the relationship between mesotopography and sediment facies in modern deep sea fans.

830056* (3542)	Engineering Geology of the Atlantic Shelf	Parrott, R	AGC	EMG	SG	Atlantic Offshore

Obj: To assess the nature of seabed instabilities and geological constraints to development on the Atlantic Shelf, especially Hibernia and Sable Island regions.

NTS: 1; 2; 3; 11; 14; 15

830057* (3542)	Temporal and Spatial Variation of Deep Ocean Currents in the Western Labrador Sea	Schafer, CT	AGC	EMG	P	Atlantic Offshore

Obj: To trace the axis of the Labrador Sea Western Boundary Undercurrent (WBU) based on evidence of its occurrence inferred from high resolution acoustic methods. To map the paleoposition of deep ocean currents pathways in Tertiary sediments using reflection seismic sections with a view to explaining the paleocurrent regime of the Protolabrador Sea Basin.

830058* (3574)	Groundwater Geochemistry in Mineral and Hydrocarbon Exploration	Boyle, DR	MR	EGC	GMR	NS Ont Man

Obj:
1. Development of methods of exploration for concealed mineral and hydrocarbon deposits using groundwaters.
2. To set up a quality controlled data base on groundwater chemistry to meet the necessary requirements of effective interpretation in mineral exploration and environmental studies.
3. Studies of geochemical parameters affecting groundwater chemistry.
4. Investigate the role of groundwater geochemistry in the formation of infiltration type mineral deposits and determine guidelines for exploration.
5. Provide input into environmental studies.
6. Provide input into the geothermal energy program.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840001 (3551)	Surficial geology inventory – area of Anderson River map area	Vincent, JS	TS	QG	-	Mack

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, and organic cover, and undertake geomorphic process studies in order to provide areal knowledge of geology and terrain that will:
1. aid in the implementation of the Territorial Land Use Regulations;
2. be pertinent to engineering construction;
3. provide data relative to terrain sensitivity rating; and
4. elucidate the Quaternary history of the region.

NTS: 97

840002* (3551)	Surficial geology inventory – area south of Dolphin and Union Strait	St-Onge, DA	TS	QG	-	Mack

Obj: To map, describe and explain the unconsolidated deposits, landforms, permafrost, and organic cover, and undertake geomorphic process studies in order to provide areal knowledge of geology and terrain that will:
1. aid in the implementation of the Territorial Land Use Regulations;
2. be pertinent to engineering construction;
3. provide data relative to terrain sensitivity rating; and
4. elucidate the Quaternary history of the region.

NTS: 96 B, Pts 96 A,C; 87 A,B,C

840003* (3571)	Regional mineral resource assessment, northern Canada – II	Jefferson, CW	MR	MD	RMRA	Yk Mack Kee Frank BC Alta Que

Obj: To conduct non-renewable resource assessment studies based on regional metallogeny, for land use planning activities including proposed national parks and other conservation areas. To contribute to descriptive and genetic models of mineral occurrences and their application to exploration and resource evaluation.

NTS: 23; 24; 46; 56; 77; 78; 82; 87; 88; 94; 95; 96; 97; 98; 105; 106

840004 (3531)	Volcanic rocks of Kaminak Lake region, N.W.T.	Taylor, FC	LCS	-	SP	Kee

Obj: To collate data gathered and partially processed by Dr. R. Ridler and compile it into a useful report.

NTS: Pts 55 E,K,L

840005* (3531)	Artillery Lake map area, District of Mackenzie	Henderson, JB	LCS	-	BS	Mack

Obj: To analyse and interpret geological data, acquired in the Artillery Lake area, leading to a geological description and development of geological models to be portrayed in a geological map and written report as part of a continuing program of activity in the Thelon Front region, the boundary between the Slave and Churchill Provinces.

NTS: Pts 75 O,P; 76 A,B

840012* (3571)	Regional mineral resource assessment – northern Canada – I	Scoates, RFJ	MR	MD	RMRA	Frank Mack Kee

Obj: To conduct non-renewable resource assessment studies based on regional metallogeny for land use planning activities including proposed national parks and other conservation areas.

NTS: 46 (W½) 77; 78; 87; 88; 95; 96; 97; 98

840013* (3531)	Granulites of Northern Churchill Province	Schau, M	LCS	-	NC	Frank

Obj: To study 2 new granulite terranes to provide field data on relations within and between high grade complexes and their country rock, as well as determine easily measured variables from samples on hand to provide geological, geophysical and geochemical constraints on models of high grade complex formation and/or emplacement.

NTS: 47 A,B,C,D

840014* (3552)	Characterization of ground ice occurrence in northern Canada	Harry, DG	TS	TD	GPEG	Mack Frank Yk

Obj: To develop an understanding of the characteristic forms and quantities of ground ice developed in a range of geomorphic and geological settings and to develop models for the better prediction of ground ice conditions and terrain performance in the permafrost regions of Canada.

NTS: 107; 117 pts

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840015 (3541)	Seabed II	Manchester, KS	AGC	PS	-	Atlantic Offshore

Obj: To develop with Huntec '70 Limited, Scarborough, Ontario, the design, manufacture and test of 500m and 2000m deep-towed high resolution seismic and sidescan, geological and bathymetric integrated mapping systems, for the continental shelf and deep ocean depths.

840016* (3531)	Etudes des roches Archéennes et Protérozoiques dans la région du Front de Grenville entre Chibougamau et Val d'Or, Québec	Ciesielski, A	LCS	-	SG	Que

Obj:
1. Reconnaissance des séries Archéennes au sub-est de la ZTFG (du zone tectonique du Front de Grenville);
2. Etudes des styles structuraux de part et d'autre de la ZTFG;
3. Comparaison des contextes géologiques de part et d'autre de la ZTFG;
4. Chronologie absolue et relative des gneiss gris et des granitoides adjaçents a la ZTFG.

NTS: 32 B,G,H,I,J

840017 (3541)	A.O.D.P. Site Survey, Labrador Sea	Srivastava, SP	AGC	RR	EAOG	Atlantic Offshore

Obj: To carry out detailed surveys over proposed drill sites in the Labrador Sea involving magnetic, seismic reflection and refraction, coring and heatflow measurements. The purpose of this survey would be to map in as much detail as possible the bathymetry, basement topography, sediment properties and geophysical signatures at each of these proposed sites.

840018* (3571)	Comparative Regional Metallogeny	Poulsen, KH	MR	MD	RMS	Ont Man Sask NS

Obj: To determine the relationships between mineralization and the tectonic history of the host rocks in various tectonostratigraphic domains; to contribute to descriptive and genetic models of mineralization and their application to exploration and resource evaluation with particular emphasis o the central Canadian Shield.

NTS: 11; 42; 52; 62; 63; 64; 73; 74

840020 (3531)	Paleomagnetism of Proterozoic igneous and sedimentary rocks of the Precambrian Shield	Fahrig, WF	LCS	-	PMag	Nfld NB NS Que Ont Man Sask Frank Mack Kee

Obj: To measure the paleomagnetism of igneous and sedimentary Proterozoic units of the Canadian Shield for use in determining the correlation of these units, their paleolatitude at the time of their formation, the relative movements of cratonic plates since the formation of these units and to contribute general information on the apparent polar wandering curve for the plates containing these units.

NTS: Pts 12-14; 21-27; 30-39; 40-49; 52-58; 62-66; 73-78; 84-88; 97

840021 (3531)	Study of Gaspé Granites	Whalen, JB	LCS	-	PET	Que

Obj: To improve existing maps of detailed petrochemical and petrologic sampling to establish:
1. the various granite phases and their field relationships;
2. the mineralogy and modal abundances in various phases;
3. the bulk rock major and trace element compositions of units;
4. the mineral phase compositions for magma modelling, and
5. isotope and rare earth geochemistry.

NTS: Pts 22 A,B

840023* (3531)	Stratigraphy and sedimentology of Silurian rocks of Gaspé	Currie, KL	LCS	-	PET	Que

Obj: To determine the tectonic-stratigraphic setting of the Cabano, Point aux Trembles and Lac Raymond Formations from the provenance, environment of sedimentation, and transporting mechanisms of the sedimentary materials.

NTS: Pts 22 B

840024* (3531)	Geology of the Northern Long Range Mountains, Newfoundland and adjacent areas	Currie, KL	LCS	-	PET	Nfld

Obj: To map and describe the metamorphic and plutonic rocks of the Northern Long Range Mountains and adjacent areas at 1:100,000 or more detailed scale; to determine the geological evolution of this terrane, and evaluate its mineral potential.

NTS: Pts 12 H,I; 2 E

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840026* (3572)	Regional Interpretation of Gamma Ray Spectrometry	Charbonneau, BW	MR	EGP	RG	Kee Mack

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. To prepare compilations of airborne gamma ray spectrometric data at scales of 1:1,000,000 and 1:5,000,000.
2. To relate the regional radiometric compilations to other geoscientific data sets, and interpret the results in collaboration with mapping geologists, economic geologists, et al.

NTS: 65 B,C; 75 D,E

840027 (3571)	Technology Transfer	Collett, LS	DGO	-	-	-

CURRENT INFORMATION NOT AVAILABLE

Obj: To exploit geoscience technology for the benefit of the Canadian mineral and energy resource industry; also to provide advice on developing geoscience technology relevant to industry and other government agencies; and to communicate these developments and other aspects of geoscience technology in writing.

840028 (3573)	Applications of Gamma Ray Spectrometry	Ford, KL	MR	EGP	RGG	Ont NB NS

CURRENT INFORMATION NOT AVAILABLE

Obj: To maximize the usefulness of airborne gamma ray spectrometric surveys as:
1. an aid to geological mapping; and
2. a multi-element exploration technique.

NTS: 31 C,L; 21 G,J; 11 D

840029* (3574)	Beaufort Sea Permafrost Geotechnics	Hunter, JA	MR	EGP	TG	Mack

CURRENT INFORMATION NOT AVAILABLE

Obj: To develop and demonstrate a geophysical capability for evaluation of the nature and extent of permafrost in the Beaufort Sea coastal and offshore areas.

NTS: 107

840030* (3573)	Interpretation of Standard Geophysical Logs	Katsube, TJ	MR	EGP	-	Ont Man

CANCELLED

Obj: 1. To develop and apply methods of interpretation to standard geophysical logs acquired as part of the Nuclear Fuel Waste Management Program.
2. To determine the physical property distribution in rock masses over distances of kilometres.
3. To determine rates of fluid and ion migration through fractures and rock matrix.

NTS: 31 K; 41 J; 52 B,L; 62 I

840031* (3573)	Borehole Geophysics/Applications Development	Killeen, PG	MR	EGP	BG	Ont Que Man NB NS

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. To develop and demonstrate the application of integrated borehole geophysical measurements in mineral exploration and mining;
2. To determine methods to quantify these measurements, and to proceed with the requisite experimental development.

NTS: 41 J; 42 A; 52 L; 63 F; 20 O; 21 O, 11 E

840032* (3574)	Lithogeochemical Studies, Gaspé Peninsula	Maurice, YT	MR	EGC	GMR	Que

Obj: To provide systematic data on a regional scale, on the major and trace element geochemistry of bedrock units in the Gaspé Peninsula. This will permit reconstitution of the evolution of the sedimentary succession, evaluate the degree of weathering which has affected these rocks, and help in the interpretation of surficial (stream, soil, till) geochemical data. All this information will ultimately lead to a better understanding of the distribution and concentration of economic minerals in the region.

NTS: 22 A,B,G,H

840033* (3512)	Potential geologic hazards to development – seafloor and shallow subbottom of Queen Charlotte Sound, B.C.	Luternauer, JL	C	-	PMG	Pacific Offshore

Obj: Identify, describe and map sedimentary, morphologic and structural evidence of potential hazards on the seafloor and shallow subbottom (down to ~500 m below the seabed) which could affect the course of hydrocarbon exploration and production on the Queen Charlotte Sound, continental shelf.

NTS: 102 I,O,P

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840035* (2551)	Géologie du Quaternaire et géochimie des tills de la région Mont-Joli/La Rédemption, Québec	Veillette, JJ	TS	QG	-	Que

Obj: 1. Cartographier les formations en surface à l'intérieur de la région à l'étude.
2. Déterminer la répartition, la hiérarchie et l'infuence relative des divers écoulements glaciaires sur le transport des matériaux.
3. A l'aide des résultats de laboratoire et des travaux de terrain délimiter, s'il y a lieu, les zones de minéralisation.

NTS: Pts 22 A,B,C,G,H

840036 (3541)	Seismic Systems Development	Nichols, B	AGC	RR	OBM	Atlantic Offshore

Obj: To coordinate the procurement, design, construction, and implementation of systems for the acquisition and processing of seismic data.

840037 (3533)	Magnetic Interpretation Techniques	Broome, HJ	LCS	LG	AI	-

Obj: To develop new qualitative and quantitative methods for the geological interpretation of aeromagnetic data as well as the refinement, compilation and documentation of existing methods.

840038 (3540)	Ocean Drilling Program: planning	Ross, DI	AGC	-	-	Atlantic Offshore

Obj: 1. To contribute effectively to the national and international planning processes of the Program.
2. To complete planning for drilling in the Labrador Sea and possibly Baffin Bay in 1985, under the auspices of the Canadian Planning Committee.

840039* (3543)	Evolution of east coast Paleozoic Basins	Bell, JS	AGC	EPG	PBG	NS NB PEI

Obj: 1. To obtain an understanding of the sedimentation, tectonics and overall Paleozoic geological evolution of the offshore continental margins of eastern Canada.
2. To incorporate new data as they become available.
3. To use the data compilations and interpretations in resource evaluations of Paleozoic successions.

NTS: 11; 20; 21

840040 (3567)	Aeromagnetic Survey Contract: Northwestern Baffin Island	Ready, EE	G	A	CS	Frank

Obj: To provide adequate aeromagnetic coverage of the above area as an aid to geological mapping and as a stimulation to mineral exploration in the area.
The contract entails the acquisition and compilation of approximately 64,000 line kms. of digitally-recorded medium sensitivity aeromagnetic data extending over approximately 71 1:50,000 map sheets.

NTS: 48 A,B,C,D; 58 A,D

840041 (359)	Canada-Saskatchewan Mineral Development Agreement (ERDA)	Galley, AC	DGO	-	-	Sask

Obj: To coordinate ERDA supported, GSC geoscience investigations in Saskatchewan to ensure their timeliness, integration and completion.

840042 (359)	Canada-Manitoba Mineral Development Agreement (ERDA)	Galley, AC	DGO	-	-	Man

Obj: To coordinate ERDA supported, GSC geoscience investigations in Manitoba to ensure their timeliness, integration and completion.

840045* (3531)	Stellarton Basin Analysis	Yeo, G	LCS	-	PET	NS

Obj: During the period 1984-1989 to review, integrate and update the geological data on the late Carboniferous rocks of the Stellarton Graben and adjacent areas, to provide a base for assessment of their coal, oil shale, methane and metal (especially Cu, Pb and U) potential.

NTS: Pts 11 E

840046* (3511)	Geology of the Iskut River – Telegraph Creek, British Columbia	Anderson, RG	C	-	CMG	BC

Obj: To update geological mapping and increase understanding of volcanic and sedimentary stratigraphy, granite plutonism and structure and to provide details useful in mineral exploration. An attempt will be made to extend stratigraphy defined to the east and south of the region into the map areas.

NTS: 104 A,B,C,F,G

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840047 (3521)	Compilation of the geology of the Innuitian Region	Trettin, HP	ISPG	RG	AI	Frank

Obj: To produce a comprehensive report on the geology of the Innuitian region as part of DNAG (Decade of North American Geology) series.

NTS: 89 A; 120 C; 340 C,D

840049* (3524)	Stratigraphy and sedimentology of the Lower Cretaceous Hulcross and Boulder Creek Formations, Rocky Mountain Foothills, Alberta and British Columbia	Gibson, DW	ISPG	CG	CG	BC Alta

Obj: To describe the Lower Cretaceous stratigraphic succession; to collect samples for laboratory studies, and to collect fossil flora and fauna; to provide data on the origin, distribution and continuity of coal seams within the Boulder Creek Formation throughout the region; to attempt to determine criteria useful in determining the sub-environments in which the marine-fluvial-deltaic sediments were deposited, and to eventually provide a regional geological model that will be of assistance in determining the potential coal resources of this and other regions.

NTS: 83 L,M; 93 I,O,P; 94 A,B

840050* (3571)	Metallogeny of Ultramafic and Mafic Rocks	Eckstrand, OR	MR	MD	MDG	Ont Que Man Sask Mack NB

Obj: 1. To increase the understanding of the occurrence and origin of mineral deposits associated with ultramafic and mafic rocks in Canada.
2. To provide geological knowledge applicable in the exploration, development, exploitation and appraisal of resources associated with such rocks including nickel, copper, platinum group elements, cobalt, chromium, vanadium, titanium and asbestos.

NTS: 42 A; 52 E,L,H; 23 J; 63 K,O; 64 C; 74 A; 75; 76; 21 B,G

840051* (3571)	Geological Evaluation and Remote Sensing (GEARS)	Rencz, AN	MR	EG	MAG	Ont Yk Que NS NB

Obj: 1. To initiate and develop remote sensing applications to investigate geological phenomenon;
2. To develop programs/projects in image analysis; and
3. To assist in cooperative projects with GSC and non GSC staff in applications of remote sensing to existing and planned projects.

NTS: 31 C,F,J,K; 105 I; 11 D,E,F; 21 J,L

840052* (3574)	Heavy Mineral Studies, Eastern Townships	Maurice, YT	MR	EGC	GMR	Que

Obj: To evaluate the favourability for the occurrence of economic deposits of Au, Sn, W, Ba, Cr, and platinum group elements on the basis of the dispersion of heavy minerals in streams.

NTS: Pts 21 E,L; 31 H

840053* (3574)	Heavy Mineral Studies, Gaspé	Maurice, YT	MR	EGC	GMR	Que

Obj: To evaluate the favourability for the occurrence of economic deposits of Au, Sn, W, Ba, Ta, Nb and other elements on the basis of the dispersion of heavy minerals in streams.

NTS: Pts 22 A,B,G,H

840054 (359)	Asbestos Initiatives Program – Geoscience Surveys Eastern Townships, Quebec	Anderson, FD	DGO	-	-	Que

Obj: To coordinate GSC geoscience investigations in Quebec that are supported by the Asbestos Initiatives Program to ensure their timeliness, integration and completion.

NTS: Pts 21 E,L; 31 H

840055 (3573)	Rock Properties Laboratory	Stephens, LE	MR	EGP	BG	-

Obj: To establish a rock properties laboratory:
1. To provide rock property measurements in support of other projects (e.g. Borehole Logging).
2. To investigate physical rock properties and their interrelationships.

840056 (3541)	Potential Fields Data Base Operations	Shih, KH	AGC	RR	GPS	-

Obj: 1. Prepare data for national marine geophysical data base and retrieve the data from it.
2. Develop and maintain software for access, manipulation and display the data at AGC.
3. Prepare data for publication.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840057* (3533)	Selected contract geophysical surveys in E. Townships, Quebec	Schwarz, EJ	LCS	LG	AI	Que

Obj: To stimulate mining exploration by geophysical surveys. To investigate the possibility of detecting buried placers (Au) and river channels by magnetic survey with particular reference to Chaudiere River Valley Deposits.

NTS: 21; 31

840058* (3574)	Follow-up Geochemistry	(Rogers, PJ)	MR	EGC	-	NS

Obj: Assess, investigate and determine the geochemical nature of regionally defined anomalies in the secondary environment in Nova Scotia and to develop new mineral exploration methodologies.

NTS: Pts 11 D,E,F,K,N

840059* (3571)	Metallogeny of Eastern Canada II	Birkett, TC	MR	MD	RMS	Nfld NS NB Que

Obj:
1. To determine the relationships between mineral deposits and their geological environments in the Canadian Appalachian, eastern Grenville and Superior and southeastern Churchill Province.
2. To contribute to descriptive and genetic models of mineral occurrences and deposits and their application to exploration and resource evaluation in these regions.

840060 (359)	Canada-Newfoundland Mineral Development Agreement (ERDA)	Poole, WH	DGO	-	-	Nfld

Obj: To coordinate ERDA-supported GSC geoscience investigations in Newfoundland to ensure their timeliness, integration and completion.

840061 (3540)	Boundary disputes: St. Pierre and Miquelon; Beaufort Sea	Ross, DI	AGC	-	-	Atlantic Offshore Arctic Offshore

Obj: To manage investigations by AGC and to coordinate surveys by RGG and CHS so as to be able to contribute effectively to advice from EMR to External concerning these disputes in the period 84/85 and 85/86 in matters involving the earth sciences, and hydrography, and prepare to contribute thereafter as may be needed.

840062* (3573)	Geophysical Studies – Nova Scotia Mineral Development Agreement	Richardson, KA	MR	EGP	TG	NS

Obj:
1. Determine geologic structure in Carboniferous rocks of Cumberland Basin, offshore Port Hood and Springhill areas.
2. Produce airborne geophysical maps to aid in geological mapping and identification of favourable areas for mineral deposits.
3. Explain geological and potential economic significance of selected airborne gamma ray anomalies.
4. Determine most suitable surface and borehole geophysical methods for detection of sandstone lead deposits (e.g. Yava Mine) and coal beds.

NTS: 11 D,E,F,K; 21 G,H

840063* (3573)	Ice Island Seismic Reflection Studies	Overton, A	MR	EGP	TG	Arctic Offshore

Obj: To conduct seismic reflection experiments on the Ice Island, to establish optimum parameters for recording sedimentary and basement reflections, with occasional tests for Moho reflections.

840064 (359)	Canada-Nova Scotia Mineral Development Agreement (ERDA)	Poole, WH	DGO	-	-	NS

Obj: To coordinate ERDA supported GSC geoscience investigations in Nova Scotia to ensure their timeliness, integration and completion.

840065* (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Manitoba (MDA 1984-89)	Ready, EE	G	A	CS	Man

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada-Manitoba Mineral Development Agreement 1984-1989.

NTS: Pts 63 J,K,N; 64 B,C; 52 E,L,M

840066 (359)	Canada-New Brunswick Mineral Development Agreement (ERDA)	Anderson, FD	DGO	-	-	NB

Obj: To coordinate ERDA supported GSC geoscience investigations in New Brunswick to ensure their timeliness, integration and completion.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840067 (3567)	Aeromagnetic Surveys, Digitization and Compilation of Existing Aeromagnetic Data Contract: Juan de Fuca Strait to Dixon Entrance	Knappers, WA	G	A	CS	BC

Obj: To provide a comprehensive aeromagnetic data base of the above area as an aid to exploration of the Pacific Margin Basin. The contract entails the acquisition and compilation of approximately 27,000 line kms. of digitally-recorded medium sensitivity aeromagnetic data extending over approximately 60 1:50,000 map sheets as well as the digitization and adjustment of existing industrial aeromagnetic data amounting to 30,000 line kilometres approximately.

NTS: 92 C,D,E,F,L; 102 I,O,P; 103 A,B,C,F,G,J,K,L

840068 (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Saskatchewan (MDA 1984-89)	Ready, EE	G	A	CS	Sask

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada-Saskatchewan Mineral Development Agreement 1984-1989.

NTS: Pts 63 K,L; 64 D, 74 A

840069 (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Eastern Township – Quebec	Ready, EE	G	A	CS	Que

CURRENT INFORMATION NOT AVAILABLE

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Federal Asbestos Initiatives Program.

NTS: Parts of 21E/4; 21E/11; Part of 21E/14; Part of 31H/1; Pts 21 E; 31 H

840070 (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Gaspé Peninsula – Quebec	Ready, EE	G	A	CS	Que

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada/Gaspé Lower St. Lawrence Economic Development Plan.

NTS: Pts 22 A,B,H

840071* (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – New Brunswick (MDA 1984-89)	Ready, EE	G	A	CS	NB

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada-New Brunswick Mineral Development Agreement 1984-1989.

NTS: Pts 21 J,O,P

840072* (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Nova Scotia (MDA 1984-89)	Ready, EE	G	A	CS	NS

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of Canada-Nova Scotia Mineral Development Agreement 1984-1989.

NTS: Pts 20 P; 21 A,H; 11 D,E

840073* (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Newfoundland (MDA 1984-89)	Ready, EE	G	A	CS	Nfld

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada-Newfoundland Mineral Development Agreement 1984-89.

NTS: Pts 12 A,H; 2 E

840074 (3567)	Aeromagnetic Surveys: Beaufort Sea Northern Yukon Territory	Knappers, WA	G	A	CS	Yk Frank

Obj: To carry out an aeromagnetic survey of the western Mackenzie Delta adjacent to an offshore area to be aeromagnetically surveyed in the Beaufort Sea to provide data for the Boundary Dispute Program.

NTS: Pts 107 B,C,D,E,F,G,H; 97 F,G; 117 A,B,C,D,E,F,G,H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840075 (3522)	Thermal Maturity Studies of the Paleozoic Sedimentary Rocks, Arctic Islands	Norford, BS	ISPG	P	MiP	Mack Frank

Obj: Determination of the thermal history of the Paleozoic rocks of the Paleozoic platform and Sverdrup Basin, Arctic Islands, using microfossil colour changes and vitrinite reflectance of the sediments. Data resulting from these studies will indicate hydrocarbon maturation and mineralized zones.

NTS: 48; 49; 50; 58; 59; 60; 67-69; 77; 78; 79; 87-89

840076* (3522)	Paleozoic biostratigraphy and biofacies studies	Norford, BS	ISPG	P	MiP	Frank Yk

Obj: Establishment and refinement of biostratigraphic zonations and correlation, and outlining of major biofacies in rocks of Ordovician to Permian age in the Arctic Islands, by combined studies of microfaunas, palynomorphs, and macrofaunas; in support of ongoing exploration and regional geology program.

NTS: 48; 49 F; 50; 58; 59; 60; 67-69; 77-79; 87-89; 106; 116

840077 (3521)	Structural geology and tectonic and stratigraphic analyses, northern Mainland and adjacent continental shelf	Lane, LS	ISPG	RG	AI	Mack

Obj: Our greatest deficiency in understanding the geology and hydrocarbon potential of the Beaufort Sea – Mackenzie Delta lies in extremely limited structural and tectonic syntheses. This project will address that deficiency by:
1. Determining the geometry, sequential development, temporal and genetic relationships of normal faults and diapiric structures.
2. Establishing the basic structural geometry and seismostratigraphy of the lower part of the supracrustal wedge and subjacent lithosphere from the northern mainland across the continental shelf to the southern edge of Canada Basin.

NTS: 106; 116; 107; 117

840078 (3521)	Structure and stratigraphy of the Paleozoic-Mesozoic basins of Melville and adjacent Islands	Christie, RL	ISPG	RG	AI	Frank

Obj: 1. To obtain an improved understanding of the sedimentary and tectonic element of the Franklinian and Sverdrup sedimentary basins in the Melville-Bathurst Islands region, to better understand the source and migration mechanisms, and entrapment, of hydrocarbons.
2. To derive improved models of Franklinian and Sverdrup basin evolution in the context of circum-Arctic tectonics.

NTS: 78; 79; 88; 89; 98; 99

840079* (3521)	Stratigraphy and structure of Arctic Continental Shelf	Embry, AF	ISPG	RG	AI	Frank

Obj: - To determine the crustal structure of the Continental Shelf.
- To determine the structural and stratigraphic architecture of the Phanerozoic succesion of the Shelf.
- To evaluate the petroleum potential of the shelf.

NTS: 79 G,H; 89 E,F,G,H; 99 E,F,G,H; 560 B,C,D,E,F,G,H; 340 G,H

840080* (3523)	Petroleum Geology, Sverdrup Basin, Franklinian Geosyncline and Arctic Interior Platform	Podruski, J	ISPG	PG	PR	Frank

Obj: To determine the distribution of source, reservoir and seal rocks for oil and gas accumulation in Paleozoic and Mesozoic rocks of the region and to add thermal, hydrodynamic, and geochemical data into a petroleum oriented basin studies program for the Franklinian and Sverdrup Basins.

NTS: 78 F,G,H; 79 B; 88 E,H,G; 89 A

840081 (3521)	Upper Paleozoic stratigraphy, Melville Island	Nassichuk, WW	ISPG	-	-	Frank

Obj: To compare upper Paleozoic subsurface stratigraphy on Melville Island with better known surface stratigraphic elsewhere in the Sverdrup Basin, including northern Ellesmere Island and Axel Heiberg Island, and to establish an upper Paleozoic depositional, stratigraphic framework for the Sverdrup Basin, including a review of diagenesis and reef development critical to an assessment for petroleum potential.

NTS: 78 B,G; 88 H

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
840082* (3521)	Geology of the Arctic Islands	Okulitch, AV	ISPG	RG	AI	Frank

Obj: Compilation of bedrock geology maps, cross-sections, geotectonic correlation charts and well data at 1:1,000,000 scale to provide regional and evaluations of geologic knowledge of the Arctic Islands in concise form for resource assessment. These compilations will also be used to produce regional maps at 1:2,000,000 and 1:5,000,000 scales for planning purposes and large scale tectonic syntheses and for publication in the DNAG Innuitian Region volume.

NTS: 59 A,B; 57 F; 67 E

840083 (3543)	Regional geology of the sedimentary basins of the continental margin of Newfoundland, Labrador and Baffin Bay	McAlpine, KD	AGC	EPG	-	-

Obj: To further our understanding of the regional geology and evolution of the sedimentary basins of offshore Newfoundland, Labrador and Baffin Bay; to develop maturation models to explain the thermal history of each basin; to generate the necessary data base for resource appraisal estimates and updates.

840084 (3543)	Interpretation of geophysical data from the Scotian Margin and adjacent areas as an aid to basin synthesis and estimation of hydrocarbon potential	MacLean, BC	AGC	EPG	-	-

Obj: To develop a structural and seismo-stratigraphic interpretation from multichannel seismic data on the Scotian Margin, as a means to an updated interpretation of the regional geology and hence oil and gas resource assessment.

840085* (3541)	Seismic Refraction along the Canadian Polar Margin	Jackson, RH	AGC	RR	OBM	Arctic Offshore

Obj: To collect seismic refraction data on the continental margin of Northern Canada to provide:
1. Crustal cross-sections of the continental margin to understand its development.
2. Sedimentary thickness and basement structural constraints in order to evaluate petroleum potential of the region.

840086* (3542)	Ice Island Sampling and Investigation of Sediments (ISIS)	Mudie, PJ	AGC	EMG	P	Arctic Offshore

Obj:
1. To determine the spatial distribution of microfossils, sediment texture, mineralogy and geotechnical properties of the sediment cover on the continental margin of Canada Basin.
2. To define, map and interpret surficial lithofacies on this margin where conditions are probably analogous to glacial stage environments off Eastern Canada.
3. To conduct high resolution biostratigraphic and stable isotope studies of the High Arctic shelf sediments in areas of high sedimentation rates.
4. To correlate paleoenvironmental data from the Canadian Basin Margin with CESAR data from the Central Arctic Ocean.
5. To construct a quantitative sediment budget for the Arctic O. margin.

840087* (3533)	Geophysical Interpretation – Precambrian	McGrath, PH	LCS	-	LG	Ont Mack

Obj: To use geophysical data to enhance knowledge of the regional aspects of the Precambrian crust with an emphasis on its third dimension.

NTS: 41; 42; 75 O

850001* (3531)	Tectonic Investigation of the Valhalla Gneiss Complex and Vicinity, Southeast BC	Parrish, RR	LCS	-	G	BC

Obj: To assess the structural kinematics of deformed gneisses in the complex, to perform detailed structural and stratigraphic mapping of the metasedimentary part of the complex, to determine the tectonic relationship between rock units of the dome to the Castlegar gneiss to the south, the Nelson Batholith to the east, the Slocan Sycline to the north, and to the Monashee Complex to the northwest, and to collect rocks for age determinations relevant to formulating a tectonic model for this area.

NTS: 82 F (W½)

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850002* (3531)	Chesterfield Inlet (55Ø, and Parts of Tavani (55K/9,16) and Marble Island (55J/13,14) map areas, District of Keewatin, NWT	Tella, S	LCS-	NC	Kee	

Obj: To map the bedrock geology at scales of 1:250 000 (55Ø) and 150 000 (55J,K) in order to determine the distribution, structure, and metamorphism of the basement complex and that of the supracrustal rocks, to distinguish the effects of Kenoran and Hudsonian Orogenies, and to assess the economic potential. Emphasis will be placed on the study of shear zones to determine their tectonic significance.

NTS: Pts 55 J,K,O

850003* (3531)	Cape Smith Fold-Thrust Belt – East End	St-Onge, MR	LCS	-	BS	Que

Obj: 1. Analysis of strain patterns within the Cape Smith fold-thrust belt contrasting ductile strain at low structural levels with brittle strain at higher structural levels.
2. Resolution of horizontal and vertical contributions to the net strain in both the fold-thrust belt and basement culminations.
3. Study of the metamorphic assemblages and derivation of P-T-X-t history of the Cape Smith Belt.

NTS: 35 G,H; 25 E

850004* (3531)	Geology of the Wager Bay "Shear Zone"	Henderson, JR	LCS	-	NC	Kee

Obj: To determine the cause of the intense east-west striking linear aeromagnetic anomaly zone on the south coast of Wager Bay (for reference see G.S.C. Map NQ15-16-17M), its westward extent, and the relationship of rocks north and south to the zone.

NTS: Pts 56 G,H,J; 46 E

850005* (3531)	Geology, Taltston Lake and Fort Resolution Map-areas	Bostock, HH	LCS	-	BS	Mack

Obj; To complete reconnaissance scale mapping of Precambrian rocks within the Talston Lake (75E) and Fort Resolution (86H) map-areas.

NTS: 75 E; 85 H

850006* (3531)	Structural Studies in the Metamorphic Hinterland of Wopmay Orogen	King, JE	LCS	-	BS	Mack

Obj: Structural analysis, evaluation and comparison of autochthonous and allochthonous basement and strain geometries at high and low structural levels in the metamorphic hinterland of Wopmay Orogen.

NTS: Pts 86 B,G,J,K,O

850007* (3532)	Paleomagnetism of the Appalachian orogen of Eastern Canada	Buchan, K	LCS	-	PMag	Nfld NB NS Que

Obj: To test models of the evolution of Appalachian terranes of Eastern North America during the Paleozoic.

NTS: Pts 1; 2; 11; 12; 21; 22

850008* (3552)	Geological and geotechnical conditions, Beaufort Sea coastal zone	Dallimore, SR	TS	TD	GPEG	Mack Yk

Obj: To provide geological and geotechnical information in the terrestrial portion of the Beaufort Sea coastal zone, including information on the surface deposits and landforms; the subsurface geological materials, including permafrost and ground ice conditions; and active geomorphological processes, so as to assist in the orderly development, sitting, design and construction of shore facilities related to the production of hydrocarbons in the Beaufort Sea region.

NTS: Pts 107, 117

850009* (3571)	Metallogeny of Eastern Canada I	Robert, F	MR	MD	RMS	Que Ont

Obj: 1. To determine relationships between mineral deposits and their geological environments in Eastern Canada, with emphasis on southeastern Superior Province and on southwestern Grenville Province.
2. To contribute to descriptive and genetic models of mineral occurrences and to their application to exploration and resource evaluation in these regions.

NTS: 31, 32

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850010* (3531)	Regional Correlation, gold-bearing volcanic belts, Flin Flon-Southend-La Ronge	Froese, E	LCS	-	PET	Sask

Obj: To gain a unified comprehension of large-scale geological features in an area underlain by Kisseynew gneisses and bordered by volcanic rocks of the Flin Flon and Lynn Lake belts. The work will emphasize a stratigraphic subdivision of the Kisseynew gneisses.

NTS: Pts 63 L,M; 64 D

850011* (3531)	Structural studies, Thompson Belt, Manitoba	Froese, E	LCS	-	PET	Man

Obj: To study problems of structural geology in the Thompson Belt. In particular, the work is to concentrate on an investigation of the Pipe 2 mine property of INCO and the immediate vicinity, an area approximately 20 km by 20 km in extent.

NTS: 63 O,P

850012 (3571)	Supervision, Ottawa-Carleton U GSC Joint Stable Isotope Laboratory	Taylor, BE	MR	MD	MDG	-

Obj: To provide appropriate expertise and leadership in the supervision of the Joint Stable Isotope Laboratory, under the terms of reference provided by the GSC-OCCGS (Ottawa-Carleton Centre for Geoscience Studies) Memorandum of Understanding and directives of the Joint Facility Management Committee.

850013 (3571)	Light Stable Isotope Geochemistry of Rock and Ore-Forming Processes	Taylor, BE	MR	MD	MDG	Ont

Obj: 1. To provide a better understanding of processes which have formed ore deposits and the earth's crust in Canada.
2. To develop models of ore-forming processes and exploration techniques based on model predicted characteristics.

NTS: 52

850014* (3531)	Geological and Geophysical Studies of the Kapuskasing Structure	Percival, JA	LCS	-	SG	Ont

Obj: To carry out and support field and laboratory investigations on the Kapuskasing structure and surrounding region as an integral part of the Kapuskasing Lithoprobe project.

NTS: 41 O,N; 42 B,C,G,I,J; 52 B,C

850015 (3531)	Georesource Studies of the Nain and Churchill Structural Provinces in North River (14E) and Nutak (14F) map-areas, Labrador (Newfoundland and Quebec)	Ermanovics, IF	LCS	-	SG	Nfld Que

Obj: Develop the georesource data base in the study area and construct a model of the Nain-Churchill boundary tectonic zone supported by detailed gravity studies and by modelled magnetic 'total field' data.

NTS: 14 E,F

850016* (3531)	Granites of the Eastern Meguma Terrane	Hill, J	LCS	-	PET	NS

Obj: To raise to a common professional standard, geological knowledge of the granitic rocks, their aureoles and associated mineralization, that lie within the Meguma terrane east of Halifax (63°30'W); to place the granites in the tectonic evolution of the region.

NTS: Pts 11 D,E,F

850017* (3531)	Geology of the southern Long Range	van Berkel, JT	LCS	-	PET	Nfld

Obj: To map the geology and structure of the southern Long Range, Newfoundland, to determine the mesoscopic and megascopic structure and petrology of the units, and to analyze their tectonic position in the Canadian Appalachians.

NTS: Pts 12 A,B

850018* (3531)	Structural analysis of the northern part of the Miramichi Massif	van Staal, C	LCS	-	PET	NB

Obj: To gain a better understanding of the structure and metamorphism of the Bathurst mining camp and related rocks in New Brunswick to develop and constrain a tectonic-evolutionary framework.

NTS: Pts 21

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850019* (3531)	Study of the New Brunswick batholith belt	Whalen, JB	LCS	-	PET	NB

Obj: 1. To improve existing maps for petrochemical and petrologic sampling.
2. To establish the mineralogy, modal compositions and whole rock major and trace element and isotopic compositions of the various plutonic rock types recognized by earlier workers (Fyffe et al., 1981).
3. To interpret the implications of granite distribution and petrogenesis for tectonic and metallogenic models of New Brunswick.

NTS: Pts 21 G,J,O,P

850020* (3541)	CIGAL – Computer Integrated Geophysical Acquisition and Logging	Loncarevic, BD	AGC	RR	-	-

Obj: To replace BIODAL with a state-of-the-art Data logging device.

850021* (3542)	Marine Geotechnical studies of the Canadian Eastern and Arctic Continental Shelves and Slopes	Moran, K	AGC	EMG	SG	Atlantic Offshore

Obj: To determine the geotechnical and physical properties of the surficial sediments of the Arctic and Eastern Continental Shelves for the determination of geologic constraints to offshore and hydrocarbon development; for the regional assessment of foundation conditions during the time frame of hydrocarbon development; for input to the Quaternary history studies of the shelves and slopes; and for input to geological modern processes studies on the continental margins.

850022 (3541)	Analysis of Marine and Satellite Gravity and Geoidal Data	Woodside, J	AGC	RR	-	-

Obj: 1. Analysis of long wavelength components of gravity and geoidal anomalies over continental margins in terms of structure and isostatic response of the lithosphere.
2. Improve expertise and analytical tools for using satellite-derived gravity and geoidal data.

850023* (3523)	Organic geochemical and maturation studies, Mainland N.W.T. and Yukon	Macqueen, RW	ISPG	PG	PR	Mack Frank Kee Yk

Obj: 1. To investigate maturation profiles of Paleozoic and Mesozoic sedimentary rocks mainly along the Dempster Highway, northern Yukon and N.W.T., in order to better understand their petroleum potential and subsidence history/tectonic setting.
2. To continue studying aspects of the organic geochemistry of the Pine Point lead-zinc deposit and regional settings.
3. To undertake study of the organic petrography of rock of the Howard's Pass lead-zinc deposit, northern Yukon.

850024* (3531)	Diagenesis and structure of the Albert Formation	Currie, KL	LCS	-	PET	NB

Obj: To determine whether there are large fault offsets within the Albert Formation, and to assess its diagenesis with respect to oil shale and metals potential.

NTS: 21 G, H, I (parts of)

850025* (3531)	Geological evolution of the southwest Churchill Province	Gordon, TM	LCS	-	PET	Man

Obj: To elucidate the tectonic evolution of the southwestern Churchill Province in Manitoba by selected geochronological studies and by related structural and metamorphic studies.

NTS: 63 N,O; 64 A,B,C

850026* (3522)	Mesozoic and Tertiary biostratigraphy and paleoecology	Wall, JH	ISPG	P	AI	Frank

Obj: To assess the assemblage composition, biochronological significance and paleoecology of Mesozoic and Tertiary microfaunas (chiefly foraminifera), microfloras, ammonites and bivalves of the Sverdrup Basin in order to better define subsurface and outcrop stratigraphy.

NTS: 49; 59; 69; 79; 88; 89; 98; 340; 560

850027* (3522)	Macropaleontology, micropaleontology and palynology of the Mesozoic and Lower Tertiary of the northern Yukon and western District of Mackenzie	McNeil, DH	ISPG	P	MiP	Yk Mack

Obj: To apply and expand existing biostratigraphy zonations in macropaleontology (Ammonoids and Bivalves) and micropaleontology (Foraminifera) and palynology; relationships of these zonations to onshore Mackenzie Delta and Interior Plains sequences as part of an integrated regional study.

NTS: 95; 96; 97; 105; 106; 107; 116; 117

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850028* (3522)	Micropaleontology, palynology and macropaleontology of the surface and subsurface Paleozoic of the northern Yukon and western District of Mackenzie	Bamber, EW	ISPG	P	MaP	Yk Mack

Obj: To establish and extend biostratigraphic zonations, with supporting taxonomic studies, for the following fossil groups: palynomorphs (Carboniferous/Permian), conodonts (Upper Paleozoic), ammonoids (Carboniferous/Permian), corals (Devonian/Carboniferous), brachiopods (Devonian to Permian) and Lower Paleozoic macrofauna. Interpretation of biofacies to determine distribution of basin and shelf environments.

NTS: 97; 106 B,E,F,L; 107; 116 C,H; 117; 85 D; 95 A

850029 (3522)	Cretaceous-Tertiary biostratigraphy and paleoecology, palynomorphs and microfossils	McNeil, DH	ISPG	P	MiP	Yk Mack

Obj: Establishment, refinement, and application of microfaunal and microfloral zonations in onshore and offshore subsurface successions of Late Cretaceous and Tertiary age in the Mackenzie Delta and Beaufort Sea in support of J. Dixon project: Stratigraphy and Sedimentology of Jurassic-Cretaceous Strata, Northern Cordillera.

NTS: 106; 107; 116; 117

850030* (3522)	Macropaleontology; micropaleontology and palynology of Devonian, Cretaceous and Tertiary rocks of the Interior Plains	Sweet, AR	ISPG	P	MiP	Yk Mack

Obj: To establish and refine biostratigraphic zonations utilizing Cretaceous and Tertiary palynomorphs, Cretaceous ammonoids and bivalves, and Devonian brachiopods, corals and conodonts and apply these to resolving stratigraphic problems arising from energy inventory and regional geological studies within the Interior Plains.

NTS: 96; 85

850031* (3521)	Lower Paleozoic stratigraphy and facies relationships in Wernecke, Ogilvie and Mackenzie Mountains	Morrow, DW	ISPG	RG	M	Yk

Obj: To determine the spatial relationships of major lower Paleozoic shelf and basinal facies strata exposed in the Wernecke and Ogilvie Mountains; to outline both their sedimentologic-tectonic setting and any post-depositional diagenetic changes that have affected them; to highlight regions that contain abrupt interfaces such as shelf-to-basin transitions or transitions between shelf margin shoal complexes and interior platformal lagoonal deposits that commonly influence diagenetic patterns and the emplacement of hydrocarbons and mineral deposits. To understand the evolution of the basin and the emplacement of hydrocarbons in this part of the Western Arctic.

NTS: 106 D; 116 A,H; 95

850032 (3521)	Stratigraphic and structural analysis of Late Paleozoic strata in the northwestern District of Mackenzie and northern Yukon	Cecile, MP	ISPG	RG	M	Yk

Obj: Late Paleozoic rocks in the northern Canadian Cordillera were deposited in a large petroleum bearing fore deep basin, the north part of which was deformed during Ellesmerian orogenesis and out by numerous strike-slip and extension faults, this project combines mapping, stratigraphic, paleontological and organic geochemical studies in the western part of the basin to provide information on the character and structural history of the basin.

NTS: 105; 106; 107; 116; 117

850034 (3523)	Mass Transfer to elements in clastic sequences	Foscolos, AE	ISPG	PG	GC	-

Obj: To study mass transfer of elements from shales to sandstones in order to understand the processes of cementation in reservoir rocks and diagenesis of shales. This data will be used to establish mineralogical stability fields for common allogenic components in shales and sandstones.

850035 (3524)	Organic maturation and properties of kerogen and bitumen in clastic and carbonate sequences in the Sverdrup Basin and Franklinian Geosyncline	Goodarzi, F	ISPG	CG	CT	Frank

Obj: To determine the properties (optical, chemical, trace element etc.) and type of kerogen and bitumen in clastic and carbonte sediments. To classify the bitumen, its origin and to make a comparison of bitumen from frontier areas to those occurring in the rest of Canada and to major bitumen occurrences in the world.

NTS: 38; 39; 48; 49; 58; 59; 68; 69; 78; 79; 88; 89; 99

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850036 (3521)	Mesozoic Basin Analysis of Sverdrup Basin, Arctic Archipelago	Embry, AF	ISPG	RG	AI	Frank

Obj: - To determine regional stratigraphic relationships within the Mesozoic strata.
- To determine environments of deposition of the strata.
- To determine the Mesozoic geologic history of the Sverdrup Basin.
- To evaluate the petroleum potential of the basin.
- To provide a logistics base for related university and other EMR research on Sverdrup Basin.

NTS: 49 B,C,D,E,F,G; 59 B,C,D,E,F,G; 69; 79; 9 A,B,C,D; 340 B,C,D; 560 A,B,D

850037* (3521)	Stratigraphy and sedimentology of Jurassic-Cretaceous strata northern Cordillera	Dixon, J	ISPG	RG	M	Yk

Obj: To evaluate the present stratigraphic scheme and to undertake detailed facies analysis of Jurassic-Cretaceous strata. To establish an understanding of the on-shore Jurassic-Cretaceous geology and to project that into the offshore Beaufort Sea.

NTS: 116; 117

850038 (3521)	Stratigraphy and structure of northern Franklin Mountains and adjacent plains	Cook, DG	ISPG	RG	M	Mack

Obj: To carry out stratigraphic and structural studies of the Northern Interior Plains including Franklin Mountains and Coleville Hills in order to gain a better understanding of the Proterozoic framework underlying the Phanerozoic basins, Phanerozoic depositional sequences and relationships to tectonic controls, and subsequent deformational geometry and mechanism. To evaluate the potential for source rocks and trapping conditions for hydrocarbons.

NTS: 86; 96; 97; 106

850039* (3521)	Investigation of stratigraphy and tectonic development of lower Paleozoic Platform-Miogeocline margin zone	Mayr, U	ISPG	RG	AI	Frank

Obj: - To describe and understand significant facies and thickness changes in terrigenous and carbonate formations in the lower Paleozoic platform Miogeocline margin zone.
- To describe and understand deformation related to intersecting Silurian and Devonian fold belts on Grinnell Peninsula.
- To describe and understand Tertiary transverse faults in the Mackinson Inlet region and to interpret their relationship, if any, to seafloor spreading in Baffin Bay.

NTS: 59 A,B; 69 A

850040 (3521)	Structural, Tectonic and Stratigraphic analysis of the Arctic Islands	Stephenson, RA	ISPG	RG	AI	Frank

Obj: To determine intermediate and deep structure of the arctic archipelago through application of reflection and refraction seismic techniques.

NTS: 49; 59; 69; 79; 89; 340; 560

850043* (3524)	Stratigraphic and coal resource analyses of coal bearing basins of Arctic Canada	Ricketts, BD	ISPG	CG	CG	Mack Yk

Obj: To study the coal bearing strata of the Arctic Platform, Franklinian Geosyncline and Sverdrup Basin with special emphasis on the Late Cretaceous-Lower Tertiary Eureka Sound Formation. To provide data for the National Coal Inventory.

NTS: 96 C,F; 78 G; 49 E,G,H; 59 G,H

850044 (3524)	Coal-Paleozoic, Mesozoic and Tertiary, western District of Mackenzie and northern Yukon Territory	Cameron, AR	ISPG	CG	CT	Mack Yk

Obj: Examine the structural framework, burial history, stratigraphy, quality, composition and areal distribution of Upper Devonian, Lower Carboniferous, Lower Cretaceous, Upper Cretaceous and lower Tertiary coal seams in the northern Cordillera and contiguous Interior Platform.

NTS: 96 C,D,E,F; 106 N; 107 B; 117 C,D; 116 O

850045 (3523)	Oil/Source correlation for Northern Interior Plains crudes	Snowdon, LR	ISPG	PG	GC	Mack

Obj: Acquire and analyze oil, condensate and possible source rock samples to make hydrocarbon/source correlations in the Northern Interior Plains. Map probable source distributions once source rocks have been identified in order to predict location of possible undiscovered reserves.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850046 (3522)	Thermal Maturity studies of the Paleozoic of the northern mainland and Tertiary of the Beaufort Sea/ Mackenzie Delta	Higgins, AC	ISPG	P	MiP	Yk Mack

Obj: Determination of organic maturity of rocks of Paleozoic and Tertiary age by the use of conodonts, palynology, scolecodonts, graptolites and sediments to determine burial and erosional history.

NTS: 116; 106; 107; 117; 97; 96

850047* (3574)	Mineral Development Agreements – Geochemistry	Friske, PWB	MR	EGC	RGC	Nfld NB Man Sask Yk Ont

Obj: To contract and/or conduct orientation, regional and follow-up geochemical surveys.
To publish high quality multi-element reconnaissance exploration data for exploration, appraisal and environmental use.

850048* (3521)	Geological Mapping in the Southern Canadian Rocky Mountains	McMechan, M	ISPG	RG	M	BC Alta

Obj: To publish 1:250,000 scale maps with cross-sections for the Southern Canadian Rocky Mountains.

NTS: 82 J; 83 C

850049* (3551)	Quaternary geology and geomorphology, northern Melville Peninsula	Dredge, LA	TS	QG	-	Frank

Obj: To map, describe and explain the unconsolidated deposits, landform, permafrost conditions and geomorphic processes in NTS 47 C in order to provide areal knowledge of geology and terrain that will:
1. elucidate the Quaternary history of the region, and;
2. provide information for mineral development and land use planning. This project is part of a long term plan to meet the need for Quaternary studies in the circum Foxe Basin region (M. Schau Project No. 840013).

NTS: 47 C

850050 (3531)	Subpaleozoic Compilation/Core Drilling	Gordon, TM	LCS	-	PET	Man

Obj: To investigate, map and interpret Precambrian geology beneath Paleozoic cover rocks adjacent to the edge of the Shield south of the Flin Flon – Snow Lake Belt in Cormorant Lake (NTS 63 K) map area.

NTS: 63 K

850051* (3551)	Echantillonnage des sédiments meubles, région de l'Ungava, Québec	Veillette, JJ	TS	QG	-	Qué

Obj:
- Comptage de fragments rocheux à environ 800 sites.
- Déterminer le pouvoir tampon des sédiments pour les pluies acides.
- Relevé des indicateurs d'écoulement glaciaire.
- Fournir des données de base pour projets futurs de cartographie dans ce secteur par la Commission géologique du Canada.

NTS: 24 K,L,M,N; 25 D,E; 34 I,J,K,L,M,N,O,P; 35 A,B,C,D,E,F,G

850052* (3571)	Metallogeny of gold in the continental crust	Poulsen, HK	MR	MD	RMS	NS Que Ont Man

Obj:
1. To increase understanding of the occurrence and genesis of hydrothermal gold deposits in Canada.
2. To work toward definition of the geological processes and environments important in the formation of gold deposits; to develop criteria for (a) exploration, and (b) assessment of gold potential.
3. In the short term to provide descriptions of major types of Canadian lode gold deposits as contributions to the DNAG volume on "Mineral Deposits of Canada".

NTS: 11 D,E,F; 42 A,E; 32 C,D,E; 63 J,K

850053* (3573)	Geophysical Studies – New Brunswick Mineral Development Agreement	Richardson, KA	MR	EGP	-	NB

CURRENT INFORMATION NOT AVAILABLE

Obj: 1. To produce airborne geophysical maps to aid in geological mapping and identification of favourable areas for mineral deposits.
2. Apply airborne geophysics to the investigation of the Miramichi earthquake area.

NTS: 21 G,J

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850054* (3573)	Geophysical Studies – Newfoundland Mineral Development Agreement	Richardson, KA	MR	EGP	-	Nfld

Obj: 1. Produce airborne gamma ray spectrometric and VLF-EM maps of selected parts of Newfoundland.
2. Determine optimum borehole geophysical methods for detection of orebodies of the types such as Newfoundland zinc, Rambler and Buchans.

NTS: 1 M: 2 D; 11O; 12 A,B,G,H,I; 14 D

850055* (3543)	Quantitative stratigraphy in paleoceanography and petroleum basin analysis	Gradstein, FM	AGC	EPG	-	-

Obj: To develop new approaches to Quantitative Stratigraphy and to apply this to the sedimentary basins of offshore eastern Canada and contiguous areas.

850056 (3543)	Regional geophysics of Mesozoic-Cenozoic of Baffin Bay-Labrador Margin	Bell, JS	AGC	EPG	-	-

Obj: To develop an understanding of the regional geology based primarily on industry multichannel seismic, to delineate oil and gas plays and prospects for input into the resource appraisal program, and to integrate the data with related disciplines to develop sequence stratigraphy models.

850057 (3543)	Sedimentology of east coast formations	Cant, DJ	AGC	EPG	-	Atlantic Offshore

Obj: To study development and destruction of hydrocarbon reservoirs due to diagenetic and post diagenetic changes, and the role of source rocks and hydrocarbons in the development of these reservoirs.

850058 (3573)	Airborne Resistivity Mapping	Palacky, GJ	MR	EGP	SP	Man Ont Mack Kee

Obj: Establishing the use of systematic airborne resistivity surveys in Canada for mineral resource inventory, delineation of extent, thickness and resistivity of glacial overburden, permafrost and sedimentary cover (not thicker than 200 m) and shallow-water bathymetry.

850059 (3531)	The tectonics of Archean and Proterozoic gneisses bordering the Ungava Trough	Baragar, WRA	LCS	-	SP	Qué

Obj: 1. To map and interpret in tectonic terms the external structural and lithological setting of the Ungava Trough.

NTS: Parts of 35 C,F,K,L

850060 (3567)	Aeromagnetic Survey – Laurentian Channel	Knappers, WA	G	A	CS	Nfld NS

Obj: To carry out a medium sensitivity aeromagnetic survey comprising approximately 77400 l/km over the Laurentian Channel and part of Cabot Strait, overlapping southern Newfoundland and eastern Nova Scotia in order to provide data for the boundary dispute program.

NTS: 1 E,K,L,M; 11 F,G,H,I,J,K,O,P

850061 (3526)	Western Canada Basin Petroleum Resources Assessment	Barclay, JE	ISPG	PG	PR	Man Sask Alta BC

Obj: To make an assessment of undiscovered oil and gas potential for Western Canada Sedimentary Basin.

NTS: 62; 72; 73; 74; 82; 83; 84; 93; 94

850062 (3526)	Evaluation of Hydrocarbon Potential of Mackenzie Corridor, Northern Mainland	Hamblin, AP	ISPG	PG	-	Yk

Obj: To assess the hydrocarbon resource potential of the mainland Yukon and Northwest Territories, in the sedimentary basins flanking the Mackenzie River (excluding Mackenzie Delta).

850063 (3522)	Service as Foreign Secretary, Canadian Geoscience Council and on other international bodies	Norford, BS	ISPG	P	MaP	-

Obj: To facilitate and to coordinate cooperation in the geosciences between non-governmental Canadian organizations and foreign non-governmental organizations. To inform the Canadian geoscientific community of the results, benefits and opportunities of such participation.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
850064 (3526)	Evaluation of the Hydrocarbon Potential of the Arctic Islands	Podruski, JA	ISPG	PG	PR	Frank

Obj: To assess the hydrocarbon resource potential of the Arctic Islands.

NTS: 37-39; 47-49; 57-59; 67-69; 77-79; 87-89; 97-99; 120; 340; 560

850065 (3567)	East Newfoundland Shelf – Orphan Knoll	Knappers, WA	G	A	CS	Atlantic Offshore

Obj: To conduct digitally-recorded high sensitivity GPS/Loran-C controlled aeromagnetic surveys comprising 116,000 l/km for inner area on a cost sharing basis with 5 oil companies headed by Chevron Standard Canada Ltd. and approximately 12,000 l/km of profiles covering the outer area.

850066 (3526)	Habitat of oil – Basin classification hydrocarbon resources	McMillan, NJ	ISPG	PRAS	-	-

Obj: To increase our basic understanding of sedimentary basins particularly to facilitate hydrocarbon evaluation by developing broad basin analogues to use as an inference net for understanding resource dispersal as related to basin tectonics and other regional parameters to define basin classification.

850067* (359)	Southern Cordillera Lithoprobe Transect	Price, RA	DGO	-	-	BC Alta

Obj: To develop an improved understanding of the current state, origin, evolution and dynamics of the lithosphere, in the southeastern Canadian Cordillera.

NTS: 82

850068* (3522)	Geochemical, sedimentological, biological and biostratigraphic changes across the Frasnian-Famennian boundary interval (Upper Devonian)	Norford, BS	ISPG	P	MaP	Alta Mack

Obj: To document and assess geochemical, sedimentological, biological and biostratigraphic changes across the boundary interval in Canada and elsewhere and to relate these changes to regional or worldwide events. To develop models to explain such events and such changes and to compare these models with others suggested to explain geochemical anomalies and biological extinctions at other horizons in the record of geological time.

850069* (3541)	Marine gravity investigation of an intrusion in the Gulf of St. Lawrence	Loncarevic, BD	AGC	RR	OBM	Que

Obj: To undertake marine gravity investigations of a large Bouguer gravity anomaly in the vicinity of Sept-Iles and to assist in the interpretation of the data.

NTS: 22 J

850070 (3541)	Regional Geologic and Plate Tectonic History of the Canadian Appalachians	Stockmal, G	AGC	RR	-	-

Obj: To reconstruct and place bounds on the large-scale plate tectonic evolution of the Canadian Appalachians in light of new data (e.g., deep seismic reflection lines) and our current understanding of tectonic processes.

860001* (3531)	Precambrian Shield of the central Boothia Uplift	Frisch, T	LCS	-	NC	Frank

Obj: Geological mapping to 1:250,000 scale of the Precambrian Shield of northern Boothia Peninsula and southern Somerset Island (between 71° and 73°N). The area includes the best exposed crystalline terrane of the Boothia Uplift and a possible extension of the Thelon Tectonic Zone, a major break in the Canadian Shield.

NTS: Pts 67 H,G; 57 G; 58 B

860002* (3531)	Central Great Bear magmatic zone	Hildebrand, RS	LCS	-	BS	Mack

Obj: Complete traverse of central Wopmay Orogen and characterize rocks and structure of the central Great Bear magmatic zone.

NTS: 86 F

860003* (3531)	Geology of the Ashuanipi Granulite Complex in the Schefferville Area	Percival, JA	LCS	-	SG	Que Nfld

Obj:
1. Produce 1:250,000 geological map of the Archean rocks of the Ashuanipi Complex in the Schefferville (23J) map sheet.
2. Study metamorphism and structure of granulites to determine their origin and P-T-fluid composition conditions.
3. Determine ages of rock types, metamorphism and uplift events.

NTS: 23 J

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
860004 (3521)	Middle and Upper Devonian stratigraphy in the subsurface of west central Alberta and northeastern British Columbia	Meijer Drees, NC	ISPG	RG	M	Alta BC

Obj: 1. Establish stratigraphic framework.
2. Correlate subsurface and surface geology.
3. Better understanding of depositional history, sedimentology and diagenesis of the carbonates.
4. Evaluate the potential for hydrocarbons and mineral deposits.

NTS: 83 M; 93 P; 94 A

860005 (3543)	Basin Atlases – Offshore Eastern Canada	Bell, JS	AGC	EPG	-	Atlantic Offshore

Obj: To generate and compile the geological information necessary and then to publish basin atlases summarizing the geology of the offshore provinces of Eastern Canada. These basin atlases are intended to summarize present knowledge and provide an accessible overview and introduction for the resource industry and interested professionals.

860006 (3521)	Structure and tectonics of Prince Patrick and adjacent islands	Harrison, JC	ISPG	RG	AI	Frank

Obj: 1. Production of 1:250,000 scale geological maps.
2. Structural and Tectonic analysis.
3. Assessment of hydrocarbon and mineral resource potential.

NTS: 89; 99

860007* (3521)	Stratigraphic – Structural analysis of Proterozoic to Devonian rocks, northern Ellesmere and Axel Heiberg Islands	Trettin, HP	ISPG	RG	AI	Frank

Obj: To improve our knowledge of geological history and economic mineral potential of the region.

NTS: 120 C,E,F,G; 340 B,C,D,E,F,G,H; 560 A,B,D

860008* (3571)	Metallogeny of Nova Scotia	Sangster, AL	MR	MD	RMS	NS

Obj: 1. To determine the relationship between mineral deposits and their geological environments in Nova Scotia and adjacent shelf portions of the Canadian Appalachian Province.
2. To contribute to the descriptive data base and to develop genetic models of mineral deposits and occurrences as pertains to mineral exploration and resource evaluations in this area.

NTS: 11; 20 O,P; 21 A,B,H

860009* (3571)	Metallogeny of New Brunswick	Watson, GP	MR	MD	RMS	NB Que

Obj: 1. To determine the relationships between mineral deposits and their geologic environments in the New Brunswick and adjacent shelf portions of the Canadian Appalachian Provinces.
2. To contribute to descriptive and genetic models of mineral occurrences and deposits and their application to exploration and resource evaluation in this region.

NTS: 11 E; 21

860010* (3521)	Baumann Fiord (49C), Vendom Fiord (49D) and Strathcona Fiord (49E)	Thorsteinsson, R	ISPG	RG	AI	Frank

Obj: To produce 1:250,000 geological maps and geological report on the above map areas; and to conduct a detailed stratigraphic and sedimentological study of the Upper Ordovician to Lower Devonian transition from shelf type carbonates to deep-water basinal clastic sediments.

NTS: 49 C,D,E

860011* (3523)	Sedimentology of Cretaceous clastics in the western Canada basin	Leckie, DA	ISPG	PG	PR	Alta

Obj: To determine the stratigraphy, environments of deposition and origin of various stratigraphic intervals of the Cretaceous of western Canada, including hydrocarbon reservoirs and source beds. The resulting detailed sedimentology will be related to regional tectonic and eustatic sea level fluctuations and the occurrences of oil and gas pools.

NTS: 72 E; 82 O; 83 L,M; 93 I

860012* (3552)	Glaciology Section, PCSP	Koerner, RM	TS	QE	G	Frank

Obj: This project will record expenditures on scientific activities carried out by the glaciology section recently transferred from PCSP.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
860013* (3567)	Vancouver Island and British Columbia Coast	Knappers, WA	G	A	CS	BC

Obj: To carry out a medium sensitivity aeromagnetic survey comprising approximately 37,000 l/km over part of Vancouver Island, Queen Charlotte Strait-Johnstone Strait-Strait of Georgia to the B.C. shoreline in order to provide digital data and total field contour maps for the MDA and A-Base programs.

NTS: 92 B,C,E,F,G,K,L,M

860014* (3541)	Marine deep seismic reflection studies – offshore E. Canada	Keen, CE	AGC	RR	OBM	-

Obj: To acquire and interpret deep multichannel seismic reflection data across the continental margins of Eastern Canada and within contiguous marine regions such as the Gulf of St. Lawrence and Hudson Bay. The major scientific benefit is to allow a more complete understanding of the structure at depth, and hence the evolution of extensional basins, margins, cratonic basins (Hudson Bay) and Appalachian structure (Gulf of St. Lawrence).

860015* (3571)	Biogeochemical methodology	Dunn, CE	MR	EG	-	Ont Que BC Sask

Obj: 1. Develop, test and publish biogeochemical methodology appropriate to exploration.
2. Study biogeochemical processes.
3. Create a biogeochemical data base.

NTS: 32 E; 92 H; 73 P; 74 A

860016* (3551)	Quaternary geology-terrain inventory, northeast Victoria Island and Stefansson Island	Hodgson, DA	TS	QG	-	Frank

Obj: Describe and explain surficial geology, with special attention paid to the last glacial stade and bracketing marine events. The source and age of the Viscount Melville Sound ice shelf should be established.

NTS: 78 A,C; B(E½)

860017* (3551)	Quaternary geology of Lake of the Woods area, Ontario	Sharpe, DR	TS	QG	-	Ont

Obj: To supervise the systematic study of the Quaternary geology of the Lake of the Woods region. The study will map and report on the Quaternary geology and drift geochemistry of the region over a four year period as part of a Federal/Provincial Mineral Development Agreement. The program is designed to help stimulate economic activity in the mining industry.

NTS: 52 E,F

860018* (3571)	Geological research on sediment-hosted base metal deposits	Sangster, DF	MR	MD	MDG	NS Que Ont Yk BC Frank Mack Kee

Obj: To conduct research on base metal deposits hosted in sedimentary rocks in order to:
1. increase the understanding of the geological distribution and origin of these deposits;
2. improve our knowledge of the definitive deposit-model characteristics of these deposits;
3. improve guidelines for resource assessment and exploration for these deposits.

NTS: 11 C; 21 E; 31 C,E; 94 B,F; 105 B; 85 B

860019* (3571)	Borehole geophysics calibration and standardization	Killeen, PG	MR	EG	BG	Ont NS Alta

Obj: To obtain quantitative data on the physical properties of rocks using borehole geophysical measurements by developing calibration facilities, improved logging equipment, and methods of calibrating and standardizing the measurements.

NTS: 31 L; 11 D; 82 O

860020 (3551)	Quaternary geology, Abitibi area, Quebec	Veillette, JJ	TS	QG	-	Que

Obj: 1. To integrate existing surficial maps into one coherent surficial geology map series at 1:1 000 000 scale, "A" series.
2. To extend mapping initiated in Temiscamingue area, south of 48°N (Project 770030), further north in Abitibi.
3. To provide maps and knowledge of Quaternary geology in one of the most active mining camps in Canada. This information is now seriously lacking.
4. To complement surficial mapping by geophysical, geochemical and drilling programs aimed at locating zones of buried valleys and others of potential interests to mineral exploration. Junction with the subsurface investigation programs done by OGS and Kidd Creek in Ontario should be considered.

NTS: 32 C,D,E,F

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
860021* (3551)	Surficial mapping in Fort Coulonge area, Quebec	Kettles, I	TS	QG	-	Que

Obj: To complete a systematic study of the Quaternary geology to determine the character, composition, age, origin and history of the Quaternary sediments and their respective landforms that will aid in (a) interpretation of drift composition and provenance, and (b) interpreting sensitivity of surficial materials to acid rain.

NTS: Pts 31 F

860022* (3511)	Geoarchitecture of the Fraser River Delta Area – Phase 1	Luthernauer, JL	C	MG	-	BC

Obj: Define the framework geology, stratigraphy, Neogene history, paleo-geography and susceptibility of earthquake damage of the Fraser River Delta area.

NTS: 92 G

860023* (3524)	Organic petrology of Canadian oil shale deposits	Kalkreuth, WD	ISPG	CG	CT	NB NS Ont Man BC Frank Mack Kee Yk

Obj: To characterize Canadian oil shales petrographically to determine maturation levels and type of organic materials.

NTS: 11 E; 21 H,I

860024 (3524)	Conversion properties of selected Canadian coals and oil shales in relation to geological age, geological setting and rank and petrographic composition	Kalkreuth, WD	ISPG	CG	CT	-

Obj: To determine the susceptibility of selected coals and oil shales from various geological ages and setting to conversion processes such as hydrogenation and pyrolysis.

860025* (3567)	Aeromagnetic Gradiometer/VLF EM Contracted Survey – Western Ontario	Ready, EE	G	A	CS	Ont

Obj: To carry out aeromagnetic gradiometer/VLF EM surveys as an aid to detailed geological mapping and mineral exploration especially in drift-covered areas and in support of the Canada-Ontario Mineral Development Agreement 1985-1990.

NTS: Pts 42 E; 52 C,E,F,H

860026* (3542)	Sedflux: On the transfer of sediment from land to the continental shelf	Syvitski, JPM	AGC	EMG	SG	-

Obj:
1. To determine the quantity and type of sediment transferred to the coast and then to the marine environment during the late Quaternary by selected rivers in Canada.
2. To understand sediment capture and escape processes on the subaerial delta and prodelta environments, including the formation, preservation or destruction of placer deposits.
3. To discern the effect (on 1&2) of: (a) relative sea level fluctuations; (b) tidal or wave condition variations; (c) fluctuations in discharge conditions; and (d) increased ground accelerations through seismic events.
4. To relate these input functions to delta morphology and architectural growth of sediment facies.

860027 (3541)	Ocean Drilling Program in the Labrador Sea and Baffin Bay	Srivastava, SP	AGC	RR	EAOG	-

Obj: To understand the paleocirculation, paleoclimatic and evolutionary history of the Labrador Sea and Baffin Bay regions a set of holes is planned to be drilled in these regions during the months of September and October 1985 as part of Leg 105 of the Ocean Drilling Program. The resulting cores from these holes will be analysed by a team of scientists on board and after the cruise and the results will be published within 3 years after the Cruise.

860028* (3511)	Global Geoscience Transects Project of International Lithosphere Program	Monger, JWH	C	-	-	-

Obj: To coordinate production of 50-200 continent to ocean transects, or cross-sections drawn to the Moho, in different parts of world, scales 1:500,000 or $1:10^6$.

860029 (3523)	Petroleum geology of Tertiary, Mesozoic and Paleozoic north of 68° on the N.W.T. and Yukon mainland and offshore	Dietrich, JR	ISPG	PG	PR	Mack Yk

Obj: To provide a reliable and adequate database for assessment by the Geological Potential Subcommittee of the area's hydrocarbon potential and to document, via publications including maps and sections as appropriate, proven and potential hydrocarbon occurrences in the area.

NTS: 97; 107; 117

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
860030 (3542)	Computer based geological map compilations – Offshore Eastern Canada	Fader, GB	AGC	EMG	SG	Atlantic Offshore

Obj: To produce a computer-based series of maps on the geology of the offshore of eastern Canada as a method of updating older published maps, releasing compilation in a more timely way, facilitating the future production of formal maps, and consolidating interpretations. The maps will be released initially on open file.

860031 (3523)	Stratigraphy and sedimentology of the Basal Colorado Sandstone (Cretaceous), Cessford Field, southern Alberta	Banerjee, I	ISPG	PG	PR	Alta

Obj: i) Define the stratigraphic status of the Basal Colorado Sandstone within the regional stratigraphic framework; ii) Develop an understanding of the sedimentary facies represented by the Basal Colorado Sandstone; iii) Use this understanding as a tool for predicting continuity and geometry of producing zones; and iv) Study the petrography of the sandstones and evaluate the controls on porosity.

NTS: 82

860032 (3523)	Petroleum geology and tectonic history of the sweetgrass arch	Podruski, JA	ISPG	PG	PR	Alta Sask

Obj: To define the location, style, timing, and influence on hydrocarbon accumulation of tectonism in the Sweetgrass Arch region of the Western Canada Sedimentary Basin.

NTS: 72 E,F,G,J,K,L,M,N,O; 82 G,H,I,J,O,P

860033* (3571)	Geochemical methodologies in glaciated terrains	Coker, WB	MR	EG	GMR	Man Ont

Obj: 1. To conduct research and development to test and formulate geochemical exploration methodolgoies for utilization in glaciated terrain.
2. To investigate Quaternary stratigraphy, utilizing the geochemical characteristics of the overburden.

860034* (3531)	Georgian Bay Geological Synthesis	Davidson, A	LCS	-	SG	Ont

Obj: To establish the origins, relationships and histories of rocks along the shore of Georgian Bay that they may be studied in the larger context of Grenville Province geology.

NTS: 41 H, parts of 31 D,E

860035* (3531)	Geology of the Chapleau and Groundhog River Blocks	Percival, JA	LCS	-	SG	Ont

Obj: To improve the geological data base of a portion of the Chapleau and Groundhog River blocks of the Kapuskasing zone and region to the west. To determine the history of metamorphism and tectonics. To correlate the geology with adjacent regions. To determine mineral potential within the region.

NTS: 42 B

860036 (3524)	Resource evaluation and geology of coal deposits of western Canada	Wrightson, CB	ISPG	CG	RE	Sask

Obj: To conduct resource evaluation programs required for the National Coal Inventory and to recommend the office and/or field studies to be undertaken to meet the requirements of the inventory program. To acquire industry and provincial government data on Canada's coal deposits. To study the geological framework within which these coals occur. To provide authoritative advice to senior Departmental officials and to scientists in government and industry on the resource potential of Canada's coal deposits. To maintain an up-to-date knowledge of coalfields in Canada.

NTS: 72 G,H

6.1.1.01	Operation of standard and regional seismograph stations	Halliday, RJ	G	-	S	-

Obj: To operate the Canadian Seismograph Network of standard and regional seismic stations to international standards for the detection and location of all Canadian earthquakes above magnitude 3.5.

6.1.1.02	Maintenance of standard and regional stations	Thomas, JT	G	-	S	-

Obj: To maintain the facilities and instrumentation of the standard and regional stations of the Canadian Seismograph Network: to ensure that all instrumentation is calibrated at least once every five years and to close stations and establish new ones as program needs dictate.

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
6.1.1.04	Operation and maintenance of digital telemetry networks	Thomas, JT	G	-	S	-
	Obj: To operate and maintain the local and regional digital telemetry seismic systems in eastern Canada.					
6.1.1.05	Field instrumentation maintenance and development	Trigg, DF	G	-	S	-
	Obj: To ensure the availability of appropriate seismological instrumentation for temporary field surveys of seismicity and crustal structure experiments by maintaining existing equipment in fully working order and by developing new instrumentation as technology allows and needs dictate.					
6.1.2.01	Management of standard and regional station data	Halliday, RJ	G	-	S	-
	Obj: To ensure the preservation and dissemination of Canadian seismological analogue data and information derived from these stations and to ensure that their quality is to international standards.					
6.1.2.02	Management of data laboratory and analysis of digital station data	Lyons, JA	G	-	S	-
	Obj: To ensure the preservation and dissemination of Canadian digital seismological data and information and to ensure that its quality is to international standards.					
6.1.2.03	Development of machine-based systems for seismic data analysis	Lyons, JA	G	-	S	-
	Obj: To develop and integrate into the Data Lab new systems to facilitate the detection, analysis, storage, and retrieval of digital seismic data.					
6.1.3.01	Determination of Canadian Seismicity	Wetmiller, RJ	G	-	S	-
	Obj: To determine the focal parameters and macro-seismic effects of Canadian earthquakes to the degree possible using all available data; and to disseminate this information to all users in a timely manner.					
6.1.3.05	Studies of Earthquake Precursory Phenomena	Buchbinder, GGR	G	-	S	-
	Obj: To undertake the seismological experiments and analyses in the Branch program of investigation of precursory geophysical phenomena in the Charlevoix zone of the St. Lawrence Valley, as an assessment of the applicability of earthquake prediction techniques to Canada.					
6.1.3.08	Seismotectonics and seismic hazard on the eastern and northern continental margin	Adams, JE	G	-	S	-
	Obj: To determine the spatial and temporal patterns of seismicity in the coastal regions of eastern Canada and the eastern Arctic, to relate these to the structural, geological and geophysical features of the ocean floor and continental margin, and to assess the associated seismic hazard with special reference to potential resource development areas.					
6.1.3.14	Physics of earthquake sources in eastern and northern Canada	Hasegawa, HS	G	-	S	-
	Obj: To employ results of research on the physics of earthquake sources in eastern and northern Canada to improve understanding of the earthquake process and estimates of seismic hazard.					
6.1.3.16	The Nahanni, Northwest Territories earthquake sequence	Wetmiller, RJ	G	-	S	-
	Obj: To analyze all data available for the Nahanni, Northwest Territories earthquake sequence in order to establish: the extent of the source volume, the focal parameters of the principal shocks; the state of crustal stress during the sequence; the macro-seismic effects; the surficial geological effects; the seismotectonic setting and the implications to seismic risk. To disseminate the results to the scientific and engineering communities as quickly as possible.					
6.1.3.17	Seismological studies for Nuclear Fuel Waste Management Program	Wetmiller, RJ	G	-	S	-
	Obj: As part of the EMR-AECL Nuclear Fuel Waste Management Program to carry out regional monitoring of northern Ontario to augment the seismicity data base and improve the estimates of seismic hazard for the eventual validation of acceptable sites.					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
6.1.3.18	Propagation and attenuation of seismic waves; magnitude studies	North, RG	G	-	S	-
	Obj: To improve knowledge of the velocity and attenuation of seismic waves in order to improve the accuracy of earthquake locations and the estimation of earthquake size by magnitude and other means.					
6.1.5.01	Seismological data monitoring and exchange	Trigg, DF	G	-	S	-
	Obj: To develop an improved ability to detect and to identify underground nuclear explosions and to assess their seismological consequences.					
6.1.5.02	Arms Control Studies	Basham, PW	G	-	S	-
	Obj: To provide advice to the Department of External Affairs on all matters pertaining to seismological verification of a ban on underground nuclear explosions.					
6.1.6.01	Provision of management and administrative support for the Seismology Section	Basham, PW	G	-	S	-
	Obj: To provide overall management and administrative support to the Seismology Section through the office of the Chief of the Section.					
6.3.1.01	Operation of Geomagnetic Observatories	Jansen Van Beek, G	G	-	GMag	-
	Obj: To operate the Canadian Geomagnetic Observatory Network, including negotiation and supervision of contracts, training of personnel and provision of standards, calibration and quality control.					
6.3.1.02	Surveys for secular variation and special charts	Newitt, LR	G	-	GMag	-
	Obj: To conduct surveys of the geomagnetic field over Canada in order to provide up-to-date magnetic charts and secular variation information.					
6.3.1.03	Development and maintenance of instrumentation for observatories and surveys	Thomas, JT	G	-	GMag	-
	Obj: To develop new and improved instruments for the Canadian Geomagnetic Observatory Network and temporary variation stations, and to calibrate, service and repair the existing equipment.					
6.3.2.01	Geomagnetic observatory data	Jansen van Beek, G	G	-	GMag	-
	Obj: To maintain, update and disseminate geomagnetic observatory data and to monitor quality of output including accuracy and reliability.					
6.3.2.02	Geomagnetic survey data	Newitt, LR	G	-	GMag	-
	Obj: To maintain, update and disseminate magnetic charts, reference fields, magnetic models, and reports on the geomagnetic field over Canada.					
6.3.2.05	Development and maintenance of data laboratory hardware and software	Vishnubhatla, SS	G	-	GMag	-
	Obj: To design, develop, maintain, repair and update laboratory facilities, including software, for transcribing, processing and editing digital geomagnetic data.					
6.3.3.01	Prediction of geomagnetic disturbances	Coles, RL	G	-	GMag	-
	Obj: By analyzing time-varying magnetic fields, solar activity, magnetospheric and ionospheric electrodynamics, and interplanetary magnetic fields, to develop improved methods for the prediction of geomagnetic storms and substorms.					
6.3.3.02	Provision of geomagnetic activity forecasts and information	Hruska, J	G	-	GMag	-
	Obj: To provide short- and long-term forecasts of geomagnetic activity throughout Canada, and to disseminate information on the variation of the earth's magnetic field.					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
6.3.3.03	Secular variation and main geomagnetic field studies	Haines, GV	G	-	GMag	-
	Obj: To study the behavior of the main geomagnetic field and its secular variation; to develop and test model representations of the field; and to investigate casual processes.					
6.3.4.11	Development and maintenance of instrumentation for earth structure studies	Trigg, DF	G	-	GMag	-
	Obj: To design, develop, construct, test, standardize, maintain, repair and update, by contract or in-house instruments and laboratory facilities for geomagnetic studies of earth structure.					
6.4.1.02	Gravity mapping of Arctic Island Channels	Halliday, DW	G	-	Grav	-
	Obj: To complete the regional gravity mapping of the Arctic inter-island in cooperation with the Polar Continental Shelf Project (PCSP) and the Canadian Hydrographic Service (CHS) and to complete regional gravity mapping of the Arctic Islands by 2005.					
6.4.1.06	Systems development and instrument maintenance	Goodacre, AK	G	-	Grav	-
	Obj: To provide systems engineering, instrument maintenance and a research laboratory facility in order to maintain and upgrade all field instruments, data acquisition systems and associated software to ensure their reliability and accuracy.					
6.4.1.13	Gravity mapping of Eastern Canada	Cooper, RV	G	-	Grav	-
	Obj: To complete the regional gravity mapping of Eastern Canada and the adjoining offshore areas.					
6.4.1.15	Augmented Gravity Mapping Program (DND-DMA)	Boyd, B	G	-	Grav	-
	Obj: To observe additional gravity stations in selected areas of Canada where present coverage is sparse or absent.					
6.4.1.16	Localized gravity surveys	Halliday, DW	G	-	Grav	-
	Obj: To intensify regional gravity mapping or to supplement regional coverage with profiles, as required, over local geological targets.					
6.4.1.17	Canadian absolute gravity service	Liard, JO	G	-	Grav	-
	Obj: a) to provide, with high International Standards of precision, absolute gravity measurements in Canada to meet present and future requirements for datum control of the Canadian Gravity Standardization Net, as reference measurements for standards laboratories, as a contribution to international experiments in global gravity field studies and for measurement of temporal variations of the Earth's gravity field. b) to maintain state-of-the-art expertise and capability in the measurement, analysis and interpretation of absolute gravity measurements.					
6.4.2.01	Gravity and crustal motion data base	Hearty, DB	G	-	Grav	-
	Obj: To provide data storage, retrieval and display services for gravity and crustal motion data in support of government research programs, the petroleum and mineral exploration industries, universities and the general public.					
6.4.2.02	Gravity standards including the Canadian Gravity Standardization Net	McConnell, RK	G	-	Grav	-
	Obj: To develop gravity reference and calibration standards to meet the needs of geophysicists and geodesists; to maintain, update and extend the Canadian Gravity Standardization Net (CGSN80); to advise, assist and collaborate with agencies outside Canada in the development of national and international gravity standards.					
6.4.2.03	Mathematical methods and systems	Buck, RJ	G	-	Grav	-
	Obj: To develop computer methods, techniques and systems required for the reduction, editing and analysis of gravity and related data.					
6.4.3.06	Impact processes and evolution of the Earth's Crust	Grieve, R	G	-	Grav	-
	Obj: To investigate meteorite impact processes on the terrestrial planets and their contribution to the evolution of the Earth's crust through studies of impact melting, natural and experimental shock deformation, geophysical parameters of circular structures and the time scale of impact events on earth.					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
6.4.3.07	Rock properties contribution to Nuclear Fuel Waste Management Program	Robertson, PB	G	-	Grav	-
	Obj: To study the physical, rock-crack and fabric properties of rock and drill-core samples obtained from designated research areas as part of the concept assessment phase of the NFWM program.					
6.4.3.14	Crustal genesis and evolution studies	Grieve, R	G	-	Grav	-
	Obj: To utilize large-scale and digital geophysical, space-derived and other databases to address general problems in crustal genesis and evolution.					
6.4.3.15	Gravitational field modelling, analysis and interpretation techniques	Nagy, D	G	-	Grav	-
	Obj: To develop mathematical techniques and computer software for modelling, analysis and interpretation of the gravitational field from surface and airborne observations.					
6.4.4.01	Management and coordination of Geophysical Activity	Gibb, RA	G	-	Grav	-
	Obj: To manage and coordinate geophysical and related activities carried out at designated areas as part of the concept assessment phase of the Nuclear Fuel Waste Management Program.					
6.4.4.02	Coordination of Geophysical Data Base	Gibb, RA	G	-	Grav	-
	Obj: To coordinate the development and utilization of a data base for geophysical and related studies carried out as part of the concept assessment and site selection phases of the Nuclear Fuel Waste Management Program.					
6.4.5.02	Coordination of all CESAR scientific results	Weber, JR	G	-	Grav	-
	Obj: To coordinate CESAR scientific results and evaluate bathymetric and gravity results.					
6.4.6.01	Provision of management and administrative support for the Gravity and Geodynamics Subdivision	Gibb, RA	G	-	Grav	-
	Obj: To provide overall management and administrative support to the Gravity and Geodynamics Subdivision through the office of the Chief of the Subdivision.					
6.5.1.01	Geodynamic observatories and data base	Popelar, J.	G	-	G	-
	Obj: To ensure availability, preservation and timely distribution of data on the earth's rotational dynamics and the stability of primary reference points for the Canadian landmass.					
6.5.1.02	Data analysis and development of new techniques	Popelar, J	G	-	G	-
	Obj: To assemble, evaluate and compare results of routine and experimental observations of the earth's rotation and polar motion to improve data reduction models, reference standards and observation techniques and to study their implications for geophysics, precise geodetic positioning and space navigation.					
6.5.1.04	Mathematical methodology and applications for satellite global positioning and navigation	Kouba, J	G	-	G	-
	Obj: Develop mathematical methods and software to facilitate world wide satellite positioning and navigation and optimize their applications in geophysics.					
6.5.2.01	Relationship of tilt, strain and gravity variations to seismicity at Charlevoix, Quebec	Lambert, A	G	-	G	-
	Obj: To measure and interpret tilt, strain and gravity changes as part of a multi-parameter study of the processes leading to earthquake rupture in the Charlevoix region.					
6.5.2.05	Aquifer-tide studies for Nuclear Fuel Waste Management Program	Bower, DR	G	-	G	-
	Obj: In cooperation with AECL staff, to interpret tidal and barometric variations in borehole piezometric measurements at selected sites in terms of hydrogeological, rock-mass, fracture and geophysical parameters.					

Project Number	Title	Project Leader	Div.	Subdiv.	Sec.	Prov.
6.5.2.07	Determination of regional and large scale deformations in Canada	Lambert, A	G	-	G	-

Obj: To introduce new measurement techniques (VLBI, GPS, Absolute Gravity) as they become available in addition to traditional geodetic methods to monitor, analyze, and interpret contemporary crustal deformation over broad areas. Prepare for monitoring deformations of the North American Plate by long baseline and gravimetric techniques with the purpose of understanding the impact of crustal deformations on local phenomena of a hazardous nature.

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ADDENDUM

Cordilleran and Pacific Margin Geoscience Division
Pacific Geoscience Subdivision

Project Number: 6.1.1.03

Leader: Bone, M.N.

Title: Maintenance and operation of Western Canada Seismograph Network

Objective: To maintain and operate the regional, digital and strong motion networks of the Canadian Seismograph Network to international standards for the detection, location and analysis of earthquakes above a magnitude 2 in the Strait of Georgia/Vancouver Island region and above magnitude 3 along the coast and in the interior region of British Columbia.

Project Number: 6.1.1.06

Leader: Bone, M.N.

Title: Operation of PGC Laboratories and Common Technical Support

Objective: To provide technical support for all EPB field and laboratory experiments and observatory operations at PGC.

Project Number: 6.1.3.09

Leader: Horner, R.B.

Title: Determination of Cordilleran Seismicity

Objective: To determine the focal parameters and macroseismic effects of earthquakes in Western Canada, adjacent waters and territories to the degree possible using all available data; and to disseminate this information in a timely manner to all users including input to the Canadian national earthquake data files.

Project Number: 6.1.3.12

Leader: Weichert, D.H.

Title: Seismic Risk Assessment and Engineering Seismology Studies in Western Canada

Objective: To undertake studies and develop methods for the delineation and evaluation of seismic risk in Western Canada; to provide input toward the next version of the seismic zoning maps of Canada and to provide services related to risk assessment in Western Canada.

Project Number: 6.1.3.15

Leader: Rogers, G.C.

Title: Seismotectonics of western Canada

Objective: To investigate the refine seismotectonic models for the western Canadian margin, as required for understanding the current tectonic processes in the region and for seismic risk analysis.

Project Number: 6.1.4.05

Leader: Rohr, K.

Title: The Structure of the Earth in Western Canada

Objective: To determine the structure of the earth across the western continental margin including the oceanic ridge and transform fault systems, and the subducting zones beneath the margin and the Canadian Cordillera.

Project Number: 6.1.4.08

Leader: Davies, E.E.

Title: Geophysical studies of the seafloor off western Canada

Objective: To study the seafloor-spreading ridge system off western Canada to provide the fundamental data base for the assessment of ridge-derived polymetallic sulphides.

Project Number: 6.1.4.09

Leader: Hyndman, R.D.

Title: Geoscience programs in western Canada

Objective: To organize, coordinate and undertake geoscience studies in western Canada and offshore, particularly related to large multidisciplinary programs such as the Ocean Drilling Program, Lithoprobe and Juan de Fuca Ridge.

Project Number: 6.2.2.11

Leader: Lewis, T.

Title: Detailed studies of heat flow and temperature distribution in western Canada

Objective: To measure and interpret heat flux and to measure and interpret radioactive heat generation in rock samples in order to improve our knowledge of tectonic processes in western Canada.

Project Number: 6.3.4.16

Leader: Law, L.K.

Title: Electromagnetic Soundings of Specific Onshore and Offshore Regions in Western Canada

Objective: To determine the electrical conductivity distribution beneath specific regions in western Canada, both onshore and offshore, related to geothermal energy resources, offshore ridge hydrothermal system and related minerals, deep crustal structure and tectonic reconstructions.

Project Number: 6.3.4.17

Leader: Irving, E.

Title: Paleomagnetic studies in western Canada

Objective: To determine the paleomagnetic polar wander path for the Western Cordillera relative to the continent by establishing time stratigraphic marker horizons.

Project Number: 6.4.1.12

Leader: Seemann, D.A.

Title: Gravity Mapping of Canadian Cordillera and Pacific offshore

Objective: To complete the regional reconnaissance gravity mapping of western Canada.

Project Number: 6.4.3.09

Leader: Sweeney, J.

Title: Cordilleran Structure and Tectonic Evolution

Objective: By means of geophysical data, including measurements of the earth's gravity field, to extend the understanding of regional structure and tectonic evolution of the Cordilleran Structural Province into the subsurface, and to gain an understanding of the ties between Cordilleran and Arctic tectonic events during the Phanerozoic.

Project Number: 6.4.3.11

Leader: Chapman, D.

Title: Geophysical studies of the Canadian Cordillera and Pacific offshore

Objective: Using gravity and other geophysical and geological information, to extend the understanding of the tectonics of southern British Columbia and its continental shelf region through the application of plate tectonics processes, structures and history.

Project Number: 6.5.2.08

Leader: Dragert, H.

Title: Determination of Crustal Strain in Western Canada using Long-Baseline Geodetic Techniques

Objective: To utilize new geodetic measurement techniques (VLBI, GPS, absolute gravity) to determine contemporary deformation over scale lengths ranging to thousands of kilometres by concentrating on the development of survey procedures and the establishment of networks suitable for precise strain measurements within the western Canada landmass.

Project Number: 6.5.2.10

Leader: Dragert, H.

Title: Monitoring of contemporary crustal deformation in western Canada

Objective: To measure regional secular deformation effects in the active seismic zones of southwest British Columbia, and interpret in terms of tectonic deformation models and in terms of major earthquake cycles. This work is to facilitate understanding of the contemporary west coast tectonics and the evaluation of the regional earthquake hazard.

Institute of Sedimentary and Petroleum Geology

Project Number: 6.2.2.12

Leader: Jessop, A.M.

Title: Heat-flow mechanisms and processes

Objective: To identify and understand the mechanisms and processes by which heat moves through the earth's crust, particularly in relation to the evolution of sedimentary basins and the maturation of the contained hydrocarbons.

Project Number: 6.1.4.06

Leader: Green, A.G.

Title: Seismological Studies of Crustal Structure of Key Geological Features by Contract

Objective: To determine the crustal structure of key geological features by conducting seismological surveys in cooperation with university and/or industrial groups.

Project Number: 6.1.4.07

Leader: Green, A.G.

Title: In-house Seismological Studies of the Earth with Emphasis on the Crustal and Upper Mantle Structure of Key Geological Features

Objective: To determine whole Earth structure with emphasis on the lithospheric structure beneath key geological features by conducting seismological surveys, by studying earthquake-generated body and surface waves, by interpreting existing multi-disciplinary data sets and by developing new computer-based interpretational techniques whenever necessary.

Project Number: 6.2.2.13

Leader: Drury, M.J.

Title: Regional heat-flow studies

Objective: To acquire and analyse data on terrestrial heat flow in Canada, with the exception of the Cordillera, and to interpret those data interms of crustal structure, tectonic development and potential economic significance.

Project Number: 6.3.4.02

Leader: Roy, J.L.

Title: Paleomagnetic Investigations of Paleozoic Rock Units from Eastern Canada

Objective: To determine the paleomagnetic apparent polar wander path for the Northern Appalachians relative to that of the continent in order to elucidate the tectonic history of the Atlantic seaboard.

Project Number: 6.3.4.04

Leader: Park, J.K.

Title: Paleomagnetic Investigations of Precambrian Rock Sequences of Selected Areas or Time Intervals

Objective: To determine segments of the paleomagnetic apparent polar wander path for the Slave, Grenville and Churchill Provinces in order to investigate the tectonic history of the Canadian Shield.

Project Number: 6.3.4.12

Leader: Lapointe, P.L.

Title: Magnetic Studies for the Nuclear Fuel Waste Management Program

Objective: To conduct rock magnetic surface sampling surveys at research areas for investigation of magnetization distribution; to conduct magnetic susceptibility logging and anisotropy measurements on deep drill core for investigation of structure and fabric.

Project Number: 6.3.4.13

Leader: Lapointe, P.L.

Title: Paleomagnetism of the Canadian Arctic Archipelago

Objective: To investigate by paleomagnetic methods the tectonic development of the northern edge of the North American craton.

Project Number: 6.3.4.15

Leader: Kurtz, R.D.

Title: Electromagnetic Studies of Crustal Structure in Eastern and Central Canada and the Canadian Arctic

Objective: To investigate deep crustal structure and electrical rock properties in key target areas in eastern and central Canada and in the Canadian Arctic.

Project Number: 6.4.3.08

Leader: Sobczak, L.W.

Title: Gravity Studies of the Structure of continental and oceanic crust, Arctic Canada

Objective: To investigate the crustal structure and plate tectonic evolution of the Arctic Islands and Arctic Ocean basin.

Project Number: 6.4.3.12

Leader: Feininger, T.

Title: Gravity Studies of Structure and origin of igneous intrusions

Objective: By means of geophysical and geological technique to study the structure and origin of igneous intrusions, and to examine their role in the evolution of the continental coast.

Project Number: 6.4.3.13

Leader: Thomas, M.D.

Title: Gravity Studies Structure and tectonics of orogenic belts

Objective: To improve knowledge of the three-dimensional structure and evolution of Canadian orogenic belts thereby providing improved regional frameworks for economic exploitation.

Terrain Sciences Division
Permafrost Research

Project Number: 6.2.2.06

Leader: Allen, V.S.

Title: Laboratory measurements and field support

Objective: To ensure the availability of equipment and laboratory services to support heat-flow and permafrost projects, by the provision of necessary field and laboratory equipment, the development of new equipment and the contracting out of services where necessary.

Project Number: 6.2.2.14

Leader: Judge, A.S.

Title: Phase changes and permafrost

Objective: To acquire data on and analyse the observed thermal characteristics of permafrost and the phenomena dependent on the phase-change properties of water; to interpret thermal data from frozen ground and freezing/thawing boundaries in terms of physical responses to climatic and geomorphological stimuli; to examine the value of various geophysical techniques in revealing the physical characteristics of frozen ground.

Project Number: 6.2.5.01

Leader: Judge, A.S.

Title: Moisture migration phenomena in frozen soils

Objective: Through contract research to develop an improved understanding of the nature of and factors governing the moisture content of frozen soils and its mobility, for the improved design of major civil engineering works such as pipelines.

Project Number: 6.2.5.03

Leader: Taylor, A.E.

Title: Offshore permafrost beneath the Beaufort Sea

Objective: To conduct problem-oriented research to improve the present knowledge of the occurrence and structure of sub-sea permafrost in the Beaufort Sea, an area of high hydrocarbon potential.

Project Number: 6.2.5.04

Leader: Judge, A.S.

Title: Gas Hydrates

Objective: To improve understanding of the distribution and nature of gas hydrates sufficient to predict or determine their presence, assess their risk to drilling and production and examine their role in long-term gas resources.

Project Number: 6.2.5.05

Leader: Pilon, P.A.

Title: Characterization of regional permafrost distribution

Objective: To conduct long-term reearch on permafrost and natural and artificial disturbance in typical northern locations; to evaluate new tools to determine the properties of permafrost; and to provide needed input parameters for experiments in the national cold temperature research facility.

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