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INITIATIVES FÉDÉRALES RELATIVES À L'AMIANTE:
PROGRAMME GÉOSCIENTIFIQUE (1984 — 1987)
*FEDERAL ASBESTOS INITIATIVES GEOSCIENCE RESEARCH
PROGRAM (1984 — 1987)*

ET / *AND*

PROGRAMME GÉOSCIENTIFIQUE DU
PLAN DE DÉVELOPPEMENT DE L'EST DU QUÉBEC (1983 — 1989)
*EASTERN QUEBEC DEVELOPMENT PLAN
GEOSCIENCE RESEARCH PROGRAM (1983 — 1989)*

LISTE DES PRODUITS
A LIST OF OUTPUTS

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INTRODUCTION

Un programme de recherche géoscientifique d'une durée de trois ans (de 1984 à 1987) a été mis en oeuvre dans la région de l'Estrie-Beauce afin d'aider à diversifier son industrie minière, laquelle dépend surtout d'une seule ressource: l'amiante. Ce programme faisait partie d'une série d'initiatives introduites par le gouvernement fédéral pour contrebalancer une sérieuse baisse d'activité économique dans la région, causée en grande partie par le déclin de l'industrie de l'amiante. Le principal objectif du programme de recherche géoscientifique était de fournir à l'industrie minière de nouvelles données géoscientifiques afin de stimuler l'exploration minière et augmenter ainsi les chances de découvrir de nouveaux gisements économiques. Une douzaine de projets ont été conçus et mis en oeuvre avec un budget total de \$1,5 millions. La nature de ces projets était variée, allant de la géochimie des dépôts meubles, à des levés géophysiques d'exploration, à des études de gîtes minéraux et de zones minéralisées.

À peu près en même temps, un programme géoscientifique de six ans (de 1983 à 1989) était mis sur pied dans le cadre du Plan de développement économique Canada/Gaspésie et Bas Saint-Laurent (par la suite renommé "Plan de développement de l'est du Québec"). Les objectifs de ce programme étaient semblables à ceux du programme géoscientifique de l'Estrie-Beauce, c'est à dire d'encourager l'exploration et la mise en valeur des ressources minérales, et ainsi renforcer le secteur minier et l'économie de la région. Ce programme de \$4,0 millions comptait 25 projets répartis selon 5 principaux domaines géoscientifiques: études géologiques, études des gîtes minéraux, levés géophysiques, études des dépôts glaciaires et géochimie des dépôts de surface.

Les deux programmes ont été mis en oeuvre par la Commission géologique du Canada. La plupart des travaux ont été exécutés à contrat.

Ce dossier public présente sous forme bibliographique, l'ensemble des produits issus des deux programmes. L'information a été compilée par D.G. Richardson, Y.T. Maurice, F.D. Anderson et W.H. Poole. Les entrées pour chaque projet ont été classés selon cinq catégories, soit: a) les publications, b) les dossiers publics, 3) les présentations visuelles (posters), 4) les présentations orales et 5) les thèses. Dans chacune de ces catégories, les entrées sont disposés par année fiscale. L'information a été recueillie auprès des participants. Les noms des officiers de de la Commission géologique responsables des divers projets sont inscrits entre parenthèses.

INTRODUCTION

A three-year Geoscience Research Program (1984 through 1987) was conducted in Quebec's Eastern Townships region to help diversify its mineral industry which is largely dependent on a single commodity: asbestos. This Program was part of series of initiatives introduced by the federal government to counter a severe slow down in the economic activity of the region, largely caused by the decline of the asbestos industry. The main objective of the Geoscience Research Program was to provide the mineral industry with new geoscientific data in order to stimulate mineral exploration and thus, improve the likelihood of finding new economic mineral deposits. With a budget of \$1.5 million, a dozen projects were designed and implemented. They ranged from geochemistry of surficial deposits, to exploration geophysical surveys, to studies of mineral deposits and mineralized areas.

About the same time, a six-year Federal Geoscience Program (1983 through 1989) was conducted under the broader *Canada Economic Development Plan for the Gaspé and the Lower St. Lawrence* (later renamed "*Eastern Quebec Development Plan*"). The objectives of this Program were similar to those of the Geoscience Program in the Eastern Townships: to encourage mineral exploration and development, and thereby to strengthen the mineral sector and the economy of the region. The \$4.0 million in the Program supported 25 projects in five geoscientific fields: bedrock geology, mineral deposits, geophysical surveys, glacial deposit studies and surficial geochemistry.

Both of these programs were carried out by the Geological Survey of Canada. Most of the studies were conducted by contractors.

This Open File presents, in bibliographic form, the cumulative output of the two geoscience programs. The Open File was compiled by D.G. Richardson, Y.T. Maurice, F.D. Anderson and W.H. Poole and outputs have been assembled for each project under five categories: a) Publications, b) Open Files, c) Posters, d) Oral Presentations and e) Theses. Within each category, entries are arranged by fiscal year. Bibliographic information was obtained from project participants. The name

INITIATIVES FÉDÉRALES RELATIVES À L'AMIANTE:
PROGRAMME GÉOSCIENTIFIQUE

FEDERAL ASBESTOS INITIATIVES GEOSCIENCE
RESEARCH PROGRAM

LISTE DES PRODUITS/LIST OF OUTPUTS
PAR LA COMMISSION GÉOLOGIQUE DU CANADA/
BY THE GEOLOGICAL SURVEY OF CANADA

Les entrées pour chaque projet ont été classées selon cinq catégories, soit:
Outputs have been divided into:

- a) Les publications/Publications
- b) Les dossiers publics/Open Files
- c) Les présentations visuelles (poster)/Posters
- d) Les présentations orales/Oral Presentations
- e) Les thèses/Theses

1.1 SOUS-PROGRAMME DE LA
GÉOCHIMIE DES DÉPÔTS
MEUBLES

OVERBURDEN GEOCHEMISTRY
SUBPROGRAM

1.1.1 Origine et distribution
de l'or placérien dans
les bassins des rivières
Chaudières et Eaton/
Origin and distribution
of placer gold deposits
in Chaudière-Eaton River
watersheds (W.W. Shilts)

a) Les publications/Publications

1985-86

Shilts, W.W. and Smith, S.L.,
Stratigraphy of placer gold
deposits: Overburden drilling in
Chaudière valley, Québec; in
Current Research, Part A,
Geological Survey of Canada,
Paper 86-1A, p. 703-712, 1986.

Shilts, W.W. and Smith, S.L.,
Stratigraphic setting of buried
gold-bearing sediments,
Beauceville area, Québec; in
Current Research, Part B,
Geological Survey of Canada,
Paper 86-1B, P. 271-278, 1986.

1986-87

Matthews, J.V., Jr., Smith, S.L.
and Mott, R.J., Plant
macrofossils, pollen, and insect
fossils of arctic affinity from
Wisconsinan sediments in
Chaudière valley, southern
Québec; in Current Research,
Part A, Geological Survey of
Canada, Paper 87-1A, p. 165-175,
1987.

Smith, S.L. and Rainbird, R.H.,
Soft-sediment deformation
structures in overburden drill
core, Québec; in Current
Research, Part A, Geological
Survey of Canada, Paper 87-1A,
p. 53-60, 1987.

Smith, S.L. and Shilts, W.W., Quaternary stratigraphy of Noire River cores, Beauceville area, Québec; in Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 159-164, 1987.

1988-89

Shilts, W.W. and Smith, S.L., Glacial geology and overburden drilling in prospecting for buried gold placer deposits, southeastern Quebec; in Prospecting in Areas of Glaciated Terrain, edited by D.R. MacDonald and K.A. Mills, Eighth Symposium on Prospecting in areas of Glaciated Terrain, p. 141-169, 1988.

1989-90

Shilts, W.W. and Smith, S.L., Drift prospecting in the Appalachians of Estrie-Beauce, Quebec; in Drift Prospecting, Geological Survey of Canada, Paper 89-20, edited by R.N.W. DiLabio and W.B. Coker, p. 41-59, 1989.

c) Les présentations visuelles/ Posters

1985-86

Shilts, W.W. and Smith, S.L., Stratigraphy of placer gold deposits: Overburden drilling in Chaudière valley, Québec, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 22-23, 1986, at the British Columbia Chamber of Mines Annual Meeting, Vancouver, January 1986, and at the 54th Annual General Meeting and Convention of the Prospectors and Developers Association of Canada, Toronto, March 1986.

1986-87

Smith, S.L. and Shilts, W.W., Characteristics of Tertiary gold-bearing sediments, Beauceville area, Québec, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 20-21, 1987.

1987-88

Matthews, J.V., Jr., Late Quaternary plant and insect macrofossils from southern Québec, at the International Union for Quaternary Research, XII International Congress, Ottawa, August 1987; abstract published in INQUA 1987, Programme with Abstracts, p. 222, 1987.

d) Les présentations orales/ Oral Presentations

1985-86

Shilts, W.W. and Smith, S.L., Geochemical studies of Appalachian tills of southeastern Québec, at the the 1985 Information Seminar on the activities of the Quebec Department of Energy and Resources, Québec City, November 1985.

1987-88

Shilts, W.W. and Smith, S.L., Overburden drilling and glacial geology of placer gold deposits, southeastern Québec, at the 89th Annual General Meeting of the Canadian Institute of Mining and Metallurgy, Toronto, May 5, 1987, at the Northeastern University, Boston, May 1987, and at the University of Windsor, February 1987; abstract published in CIM Bulletin v. 80, no. 899, p. 65, March 1987.

1.1.2 Analyses d'échantillons en archives/Analysis of archived samples (W.W. Shilts)

Les produits pour ce projet ont été inclus avec ceux du compris projet 1.1.1

Outputs included in project 1.1.1.

1.1.3 Études des minéraux lourds/Heavy mineral studies (Y.T. Maurice)

a) Les Publications/Publications

1985-86

Maurice, Y.T., Interprétation sommaire des résultats d'un levé géochimique de minéraux lourds en Estrie, Québec; dans La géochimie d'exploration au Québec, Ministère de l'Énergie et des Ressources du Québec, DV85-11, p. 141-149, 1985.

Maurice, Y.T., Interpretation of a reconnaissance geochemical heavy mineral survey in the Eastern Townships of Québec; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 307-317, 1986.

Maurice, Y.T. and Mercier, M.M., A new approach to sampling heavy minerals for regional geochemical exploration; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 301-305, 1986.

Maurice, Y.T. et Mercier, M., Procédure d'échantillonnage des minéraux lourds alluvionnaires au moyen de concentrateurs mécaniques; dans La géochimie d'exploration au Québec, Ministère de l'Énergie et des

Ressources du Québec, DV85-11, p. 151-158, 1985.

1987-88

Maurice, Y.T., On redécouvre les placers d'or de l'Estrie-Beauce; GEOS, v. 16, no. 4, p. 6-10, Automne 1987.

Maurice, Y.T., Répartition du Cr, Pt, Pd, et Ir dans les dépôts de surface de l'Estrie-Beauce, Québec; dans Recherches en cours, partie B, Commission géologique du Canada, Étude 88-1B, p. 1-8, 1988.

1988-89

Maurice, Y.T., Regional alluvial heavy mineral geochemistry as a prospecting method in glaciated Appalachian terrain: A case history from the southern Québec placer-gold belt; in Prospecting in Areas of Glaciated Terrain 1988, edited by D.R. MacDonald and K.A. Mills, Canadian Institute of Mining and Metallurgy, p. 185-203, 1988.

Maurice, Y.T., La géochimie des minéraux lourds: Une aide à l'exploration minière en Estrie-Beauce; dans Cahier des conférences, Institut canadien des mines et de la métallurgie, 6^e Réunion du district No. 2, p. 1-15, 1988.

b) Les dossiers publics/ Open Files

1985-86

Maurice, Y.T. and Mercier, M., Méthode d'échantillonnage et résultats d'un levé géochimique de minéraux lourds en Estrie, Québec (SNRC 21E/3, 4, 5, 6, 12); Commission géologique du Canada, Dossiers Public 1145, 17 cartes (1:250,000) et un texte donnant une description des

méthodes d'échantillonnage, de préparation des échantillons et analytiques utilisées, 22 avril 1985.

1986-87

Maurice, Y.T., Résultats et interprétation d'un levé géochimique de minéraux lourds, régions de l'Estrie et de la Beauce, Québec (SNRC 21E/7, 8, 10, 11, 13, 14, 15, 16; 21L/2, 3); Commission géologique du Canada, Dossier Public 1332, 125p., 16 cartes (1:250,000), 18 novembre 1986.

1988-89

Maurice, Y.T., Géochimie des minéraux lourds, région de l'Estrie-Beauce, Québec (SNRC 21L/4, 5, 6); Commission géologique du Canada, Dossier Public 1918, 75p., 16 cartes (1:250,000), 29 mars 1989.

c) Les présentations visuelles/ Posters

1985-86

Maurice, Y.T. and Mercier, M., The distribution and geochemical dispersal mechanisms of gold in southwestern Québec, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 22-23, 1986.

1986-87

Maurice, Y.T., Geochemical mapping of the southern Québec placer gold districts using heavy mineral technology, at the 55th Annual General Meeting of the Prospectors and Developers Association of Canada, Toronto, March 1987.

Maurice, Y.T. et Paré, D.G., Cartographie géochimique de la région des placers aurifères du

sud de Québec en se servant de la technologie des minéraux lourds, présenté au Forum des travaux en cours, Commission géologique du Canada, janvier 1987.

1987-88

Maurice, Y.T., Alluvial heavy minerals geochemistry in tracing regional glacial dispersal: Application to prospecting for precious metals in glaciated areas, at the International Union for Quaternary Research, XII International Congress, Ottawa, August 1987; abstract published in INQUA 1987, Programme with Abstracts, p. 222, 1987.

Maurice, Y.T., La géochimie des minéraux lourds alluvionnaires en Estrie-Beauce, présenté au Séminaire d'information 1987 du Ministère de l'Énergie et des Ressources du Québec, Québec, décembre 1987.

Maurice, Y.T., Gold and platinum-group element distribution in surficial materials in the Eastern Townships of Québec, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 19-20, 1988, and at the 56th Annual General Meeting and Convention of the Prospectors and Developers Association of Canada, Toronto, March 1988; abstract published in Geological Survey of Canada, Current Activities Forum 1988, Program with Abstracts, p. 24, 1988.

1988-89

Maurice, Y.T., La géochimie des minéraux lourds: Une aide à l'exploration minière en Estrie-

Beauce, présenté à la 6^e Réunion du District No. 2 de l'ICM, Thetford Mines, 3 août 1988; résumé publié dans le Bulletin Canadien des Mines et de la Métallurgie, v. 81, no. 914, p. 19, juin 1988.

1989-90

Maurice, Y.T., Eastern Township gold: How is it distributed? Where does it come from?, at the GAC/MAC Joint Annual Meeting, Montreal, May 15-17, 1989.

d) Les présentations orales/
Oral Presentations

1985-86

Maurice, Y.T., On the origin of placer gold in the Quebec Appalachians and exploration guidelines, at the 88th Annual Meeting of the Canadian Institute of Mining and Metallurgy, Montreal, May 14, 1986; abstract published in CIM Bulletin v.79, no. 7887, p. 70, March 1986.

Maurice, Y.T., Géochimie des minéraux lourds en Estrie, présenté à Séminaire d'information 1985 Ministère de l'Énergie et des Ressources du Québec, Québec, 28 novembre 1985.

Mercier, M.M., Les techniques d'échantillonnage et de concentration des minéraux lourds en exploration, présenté au Séminaire d'information 1985 du Ministère de l'Énergie et des Ressources du Québec, Québec, 28 novembre 1985.

1986-87

Maurice, Y.T., Alluvial heavy minerals in gold exploration, at the Seminar on Gold Dispersion in Surficial Media, Mineral

Exploration Research Institute, McGill University, Montreal, March 1987.

1988-89

Maurice, Y.T., Regional alluvial heavy mineral geochemistry as a prospecting method in glaciated Appalachian terrain: A case history from the southern Québec placer-gold belt, at the Prospecting in Areas of Glaciated Terrain Symposium, Halifax, August 28, 1988.

Maurice, Y.T., La Géochimie d'exploration par l'échantillonnage des minéraux lourds, présenté à l'Université du Québec à Montreal dans le cadre d'un séminaire de maîtrise, le 10 février 1989.

Maurice, Y.T., L'exploration pour l'or par la géochimie des minéraux lourds, présenté à 1er Congrès de l'Association professionnelle des géologues et des géophysiciens du Québec, Val d'Or, Québec, 30-31 mars 1989.

1989-90

Maurice, Y.T., Identification de cibles d'exploration pour les éléments du groupe du platine à partir de leur distribution régionale dans les dépôts quaternaires des cantons de l'est, présenté au Séminaire d'information 1989 du Ministère de l'Énergie et des Ressources du Québec, Québec, novembre 1989.

1.1.4 **Téledétection
appliquée à la
prospection
glaciaire/Remote
sensing applied to
drift prospecting
(J.R. Bélanger)**

a) Les publications/Publications

1988-89

Bélanger, J.R., Prospecting in glaciated terrain: An approach based on geobotany, biogeochemistry, and remote sensing; Geological Survey of Canada, Bulletin 387, 38p., December 1988.

c) Les présentations visuelles/ Posters

1985-86

Bélanger, J.R., The study of a geochemical anomaly using geobotany, biogeochemistry, and remote sensing methodology, Thetford Mines area, Canada, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 1985.

1987-88

Bélanger, J.R., Mineral prospecting in glaciated terrain based on geobotany, biogeochemistry and remote sensing, at the International Union for Quaternary Research, XII International Congress, Ottawa, August 1, 1987; abstract published in INQUA 1987, Programme with Abstracts, p. 127, 1987.

1989-90

Bélanger, J.R., Prospecting based on geobotany and remote sensing, at the 7th Thematic Conference on Remote Sensing for Exploration Geology, Calgary, Alberta, October 2-6, 1989; abstract published in ERIM (Environmental Research Institute of Michigan) Summaries, 7th Thematic Conference, p. 158, 1989.

Bélanger, J.R., Mineral Prospecting using remote sensing techniques for gold and uranium mineralization in areas of ultrabasic rocks, at the Geological Survey of Canada Minerals Colloquium, Ottawa, January 17-18, 1990; abstract published in Geological Survey of Canada Minerals Colloquium Program with Abstracts, p. 14, 1990.

d) Les présentations orales/ Oral Presentations

1985-86

Bélanger, J.R., The study of a geochemical anomaly using geobotany, biogeochemistry, and remote sensing methodology, Thetford Mines area, Canada, presented at Tirupati, India, November 1985.

1.2 SOUS-PROGRAMME DE LA GÉOPHYSIQUE D'EXPLORATION
EXPLORATION GEOPHYSICS
SUBPROGRAM

1.2.1 Exploration de cibles choisies par des levés géophysiques à contrat/Selected exploration by contract geophysical surveys in Québec (E.J. Schwarz)

b) Les dossiers publics/ Open Files

1985-86

Schwarz, E.J., Levé de reconnaissance de polarisation provoquée dans des sédiments contenant du cuivre, Sutton, Cantons de l'est, Québec; Commission géologique du Canada, Dossiers Publics 1151, mai 1985.

**1.2.2 Levés géophysiques
aéroportés/Airborne
geophysical surveys
(E.J. Schwarz)**

a) Les publications/Publications

1986-87

Geological Survey of Canada, High resolution aeromagnetic total field and vertical gradiometer survey of the Lambton-Weedon-Scotstown area, Québec; Geological Survey of Canada, 1:20,000 scale aeromagnetic total field maps 21060G to 21065G; 1:20,000 scale vertical gradient maps 41060G to 41065G; 1:50,000 scale combined aeromagnetic total field and VLF EM total field profiles C21066G and C21067G; and 1:50,000 scale combined aeromagnetic vertical gradient and VLF EM quadrature profiles C41066G and C41067G, April 29, 1986.

1987-88

Schwarz, E.J., Palacky, G.J., Stephens, L.E., Dion, D.J., Lefebvre, D.L., Church, H. et Gravel, C., Levé hélicoptéré magnétique et électromagnétique des monts Stoke, Québec, et interprétation géologique préliminaire; dans Recherche en cours, partie B, Commission géologique du Canada, Étude 88-1B, p. 23-27, 1988.

b) Les dossiers publics/
Open Files

1986-87

Schwarz, E.J., Interprétation des levés magnétiques et radiométriques aéroportés dans la région de Weedon, Québec; Commission géologique du Canada, Dossier Public 1311, 86p., 2 cartes (1:50,000), mai 1986.

1987-88

Geological Survey of Canada, Conductivity, magnetic total field, and vertical magnetic gradient maps of Monts Stoke area, Québec (21E/5); Geological Survey of Canada, Open File 1591, (1:20,000 contour maps 25038G, 21311G, 41311G; 1:50,000 colour maps C25037G, C21312G, C41312G), August 1987.

c) Les présentations visuelles/
Posters

1986-87

Schwarz, E.J., Hood, P.J., Palacky, G.T. and Ready, E.E., Helicopter magnetic gradient and EM survey of the Monts Stoke area, Québec, at the Geological Survey of Canada, Current Activities Forum, Ottawa, January 20-21, 1987.

d) Les présentations orales/
Oral Presentations

1986-87

Deschambault, C., Chouteau, M. et Schwarz, E.J., Traitement et interprétation des données a é r o m a g n é t i q u e s e t gradiométriques de la région de Weedon, Cantons de l'Est Québec, présenté au 88e Congrès annuel de l'ICM, Montreal, Québec, 13 mai 1986; résumé publié dans Le Bulletin Canadien des Mines et de la Métallurgie, v. 79, no. 887, p. 54-55, mars 1986.

e) Les thèses/Theses

1988-89

Arsenault, J-L., Interpretation géologique de léve geophysique heliporte dans la region des Monts Stoke (Estrie), Baccalauréat en ingénierie, Department de genie mineral, Ecole Polytechnique, Université

de Montreal, avril 1988.

**1.2.3 Détection de placers enfouis en utilisant des méthodes géophysiques/
Geophysical detection of buried placers
(E.J. Schwarz)**

a) Les publications/Publications

1986-87

Schwarz, E.J. and Wright, N., Buried placers in Chaudière River sediments indicated by ground magnetometer survey, Eastern Townships, Québec; in Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 423-428, 1987.

1988-89

Schwarz, E.J. and Wright, N., The detection of buried placer deposits by ground magnetic survey; Geophysical Prospecting, v. 36, p. 919-932, 1988.

1990-91

Schwarz, E.J., Distinguishing buried alluvium from till by using detailed total-magnetic-field data; Canadian Journal of Earth Sciences, v. 27, no. 4, p. 513-519, April 1990.

c) Les présentations visuelles/
Posters

1986-87

Schwarz, E.J. and Wright, N., Detecting buried placers by magnetic survey, Chaudière River, Québec, at Gold'86: An International Symposium on the Geology of Gold Deposits, Toronto, Ontario, September 28 - October 1, 1986, and at the Geological Survey of Canada Current Activities Forum,

Ottawa, January 1987; abstract published in Gold'86, Poster Paper Abstracts, edited by A.M. Chater, p. 132-135, 1986.

d) Les présentations orales/
Oral Presentations

1986-87

Schwarz, E.J. and Wright, N., Detecting buried placers by magnetic surveys, Chaudière River, Québec, at Gold'86: An International Symposium on the Geology of Gold Deposits, Toronto, Ontario, September 28 - October 1, 1986.

**1.3 SOUS-PROGRAMME DES ÉTUDES
MÉTALLOGÉNIQUES**

**METALLOGENIC STUDIES
SUBPROGRAM**

**1.3.1 Études de la géochimie du gîte de Au-Ag-W de Saint-Robert Métal/
Geochemical study of St. Robert Metal Au-Ag-W deposit
(W.D. Sinclair)**

a) Les publications/Publications

1985-86

Cattalani, S. and Williams-Jones, A.E., Geological and fluid inclusion studies at the Saint Robert Ag, W, Bi deposit, Eastern Townships, Québec; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 365-374, 1986.

b) Les dossiers publics/
Open Files

1988-89
Cattalani, S. and Williams-Jones, A.E., Geological fluid inclusion and stable isotopic studies of the St. Robert W-Ag-Bi vein deposit, Eastern Townships, Québec; Geological Survey of Canada, Open File 2049, 68p., January 1989.

d) Les présentations orales/
Oral Presentations

1986-87
Cattalani, S. and Williams-Jones, A.E., Aqueous and CO₂-CH₄-N₂-bearing fluid inclusions at the St. Robert Ag-W-Bi deposit, Eastern Townships, Québec, at the GAC/MAC/CGU Joint Annual Meeting, Ottawa, May 21, 1986; abstract published in GAC/MAC/CGU Program with Abstracts, v. 11, p. 53, 1986.

1.3.2 **Études sur les métaux usuels dans la région des Monts Sutton/Base metal studies, Mount Sutton region (D.F. Sangster)**

a) Les publications/Publications

1989-90
Kumarapeli, P.S., Kheang, L., Hoy, L. and Pintson H., Chalcopyrite-bornite and chalcopyrite-bornite-barite in the Acton Vale limestone, southeastern Québec: Mineralized shelf margin slivers in a Taconian nappe; Canadian Journal of Earth Sciences, v. 27, no. 1, p. 27-39, January 1990.

d) Les présentations orales/
Oral Presentations

1986-87
Kheang, L. and Kumarapeli, S., Low salinity aqueous fluids of

Acton Vale, Upton and Lord Aylmer carbonate-hosted base metal deposits, Eastern Townships, Québec, at the GAC/MAC/CGU Joint Annual Meeting, Ottawa, May 19, 1986; abstract published in GAC/MAC/CGU Program with Abstracts, v. 11, p. 89, 1986.

1989-90

Kumarapeli, S., Hoy, L. and Pintson, H., Origin of Cu and Cu-Ba mineralization in the Acton Vale limestone, southeastern Québec: Evidence from sulphur and strontium isotopes, at the GAC/MAC Joint Annual Meeting, Montreal, Québec, May 17, 1989; abstract published in GAC/MAC Program with Abstracts, v. 14, p. A121, 1989.

1.3.3. **Cristallinité des illites près de Barnston/Illite crystallinity studies near Barnston (T.C. Birkett)**

a) Les publications/Publications

1985-86
Samson, I.M. and Williams-Jones, A.E., Illite crystallinity studies in the Gaspé-Connecticut Valley synclinorium around Barnston, Québec; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 359-364, 1986.

c) Les présentations visuelles/
Posters

1984-85
Samson, I.M. and Williams-Jones, A.E., Illite crystallinity

studies in the Gaspé-Connecticut Valley synclinorium around Barnston, Québec, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 1985.

1.3.4 Cristallinité des illites, région de Saint Robert Métal/Illite crystallinity studies, St. Robert Metal deposit area (T.C. Birkett)

a) Les publications/Publications

1985-86

Van Bosse, J.Y., Samson, I.M. and Williams-Jones, A.E., Illite crystallinity studies around the Roberts Metal deposit, Eastern Townships, Québec; in Current Research, Part B, Geological Survey of Canada, Paper 86-1B, p. 865-868, 1986.

1.3.5 Métallogénie de la chromite, mine Sterrett/Chromite metallogeny, Sterrett mine (T.C. Birkett)

b) Les dossiers publics/ Open Files

1989-90

Trzcienski, W.E., Jr., Studies in the Sterrett mine area, Eastern Townships, Québec; Geological Survey of Canada, Open File 2015, 40p., 2 appendices and 3 maps (1:1000 scale), September 1989.

**PROGRAMME GÉOSCIENTIFIQUE DU PLAN DE
DÉVELOPPEMENT DE L'EST DU QUÉBEC**

**EASTERN QUEBEC DEVELOPMENT PLAN GEOSCIENCE
RESEARCH PROGRAM**

**LISTE DES PRODUITS/LIST OF OUTPUTS
PAR LA COMMISSION GÉOLOGIQUE DU CANADA/
BY THE GEOLOGICAL SURVEY OF CANADA**

Les entrées pour chaque projet ont été classées selon cinq catégories, soit:
Outputs have been divided into:

- a) Les publications/Publications
- b) Les dossiers publics/Open Files
- c) Les présentations visuelles (poster)/Posters
- d) Les présentations orales/Oral Presentations
- e) Les thèses/Theses

**1 SOUS-PROGRAMME DE LA
GÉOLOGIE DES ROCHES ET
DES GITES MINÉRAUX**

**MINERAL DEPOSITS AND
BEDROCK GEOLOGY
SUBPROGRAM**

- 1.1 Inventaire et synthèse
des ressources minérales/
Mineral deposit inventory
and synthesis
(D.F. Sangster)**

Projet de soutien, aucun produit.

Support project, no outputs.

- 1.2 Géochimie, Zone E, Mine
Gaspé/Geochemistry, E-
Zone, Gaspé Copper
(F. Robert)**

- a) Les publications/Publications

1986-87

Procyshyn, E.L., Wall rock alteration mineral assemblages associated with the E-Zone ore bodies at Mines Gaspé, Murdochville, Québec; in Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 499-514, 1987.

- 1.3 Géochimie des roches
granitiques des monts
McGerrigle/Geochemistry of
Mount McGerrigle granite
(J.B. Whalen)**

- a) Les publications/Publications

1984-85

Whalen, J.B., The McGerrigle plutonic complex, Gaspé, Québec: Evidence of magma mixing and hybridization; in Current Research, Part A, Geological Survey of Canada, Paper 85-1A, p. 795-800, 1985. (Aussi disponible en français)

1985-86
Wallace, G.M., The mineralogy of the McGerrigle plutonic complex, Gaspé, Québec; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 507-514, 1986.

Whalen, J.B. and Gariépy, C., Petrogenesis of the McGerrigle plutonic complex, Gaspé, Québec: A preliminary report; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 265-274, 1986.

1986-87
Whalen, J.B. and Roddick, J.C.M., K-Ar geochronology of the McGerrigle plutonic complex, Gaspésie Peninsula, Québec; in Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 375-380, 1987.

1987-88
Whalen, J.B., Géologie du complexe plutonique des monts McGerrigle, Péninsule de la Gaspésie, Québec/Geology of the McGerrigle Mountains plutonic complex, Gaspé Peninsula, Québec; Commission géologique du Canada/Geological Survey of Canada, carte/map 1665A (1:25,000), 1987.

1989-90
Whalen, J.B., Granitic rocks of New Brunswick and Gaspé, Québec: An overview from some current studies; in Mineral Deposits Associated with Siluro-Devonian Plutonism in the New Brunswick-Gaspé Sector, Geological Association of Canada Annual Meeting, Field Trip Guidebook B5, p. 18-26, 1989.

1990-91
Wallace, G.M., Whalen, J.B. and Martin, R.F., Agpaitic and

miaskitic nepheline syenites of the McGerrigle plutonic complex, Gaspé, Québec: An unusual petrological association; Canadian Journal of Earth Sciences, v. 28, pt. 2, p. 251-266, June 1990.

b) Les dossiers publics/
Open Files

1986-87
Whalen, J.B., Géologie du complexe plutonique des monts McGerrigle, Gaspésie, Québec/Geology of the McGerrigle Mountains plutonic complex, Gaspé, Québec; Commission géologique du Canada/Geological Survey of Canada, Dossier Public/Open File 1284, une/one carte/map (1:25,000), mai/May 1986.

c) Les présentations visuelles/
Posters

1984-85
Whalen, J.B., A petrological study of the McGerrigle pluton, Gaspé, Québec, at the Geological Survey of Canada Current Activities Forum 1985, Ottawa, January 23-24, 1985.

1986-87
Whalen, J.B., The McGerrigle plutonic complex, Gaspé, Québec: Evidence of magma mixing and hybridization, at the GAC/MAC/CGU Joint Annual Meeting, Ottawa, May 21, 1986; abstract published in GAC/MAC/CGU Program with Abstracts, v. 11, p. 143, 1986.

1988-89
Robert, F., Gariépy, C. and Whalen, J.B., Pb isotope geochemistry of the Topsail, Mt. McGerrigle and Eastern Townships granitoid intrusives, at the

GAC/MAC/CSPG Joint Annual Meeting, St. John's, Newfoundland, May 25, 1988; abstract published in GAC/MAC/CSPG Program with Abstracts, v. 13, p. A104, 1988.

d) Les présentations orales/
Oral Presentations

1986-87

Gariépy, C. et Whalen, J.B., *Pétrologie du complexe plutonique des Mont McGerrigle, Gaspésie: Résultats préliminaires*, présenté à 54^e Congrès de l'Association canadienne française pour l'avancement des sciences, Université de Montréal, septembre 1986.

1988-89

Whalen, J.B., *Granitic rocks of New Brunswick and Gaspé, Quebec: A transect across the southern Canadian Appalachians*, at the GAC/MAC/CSPG Joint Annual Meeting, St. John's, Newfoundland, May 25, 1988; abstract published in GAC/MAC/CSPG Program with Abstracts, v. 13, p. A133, 1988.

e) Les thèses/Theses

1988-89

Wallace, G.M., *Petrogenesis of the McGerrigle Plutonic Complex, Gaspé, Quebec*; unpublished M.Sc. thesis, McGill University, Montreal, Quebec, 296 p., avril 1988.

1.4 **Études structurales des massifs ultrabasiques/**
Structural studies,
ultrabasic rocks
(K.L. Currie)

a) Les publications/Publications

1984-85

Gagnon, Y.D. and Jamieson, R.A., *Geology of the Mount Albert region, Gaspé Peninsula, Québec; in Current Research, Part A, Geological Survey of Canada, Paper 85-1A, p. 783-788, 1985.* (Aussi disponible en français)

1985-86

Gagnon, Y.D. et Jamieson, R.A., *Étude de la semelle métamorphique du complexe du Mont Albert, Gaspésie, Québec; dans Recherches en cours, Partie B, Commission géologique du Canada, Étude 86-1B, p. 1-10, 1986.*

1989-90

O'Beirne-Ryan, A.M., Jamieson, R.A. and Gagnon, Y.D., *Petrology of garnet-clinopyroxene amphibolites from Mont Albert Gaspé, Quebec; Canadian Journal of Earth Sciences, v. 27, no. 1, p. 72-86, January 1990.*

1.5 **Métallogénie, veines de Pb-Zn-Ba/Metallogeny of Pb-Zn-Ba veins**
(D.F. Sangster)

a) Les publications/Publications

1987-88

Schrijver, K. and Beaudoin, G., *Diverse occurrences of galena-cemented sandstones in the Paleozoic, northern Appalachians, Québec; Canadian Institute of Mining and Metallurgy, v. 80, no. 908, p. 54-62, December 1987.*

1988-89

Schrijver, K., Marcoux, E., Beaudoin, G. and Calvez, J.Y., *Pb-Zn occurrences and their Pb-*

isotopic signatures bearing on metallogeny and mineral exploration, Paleozoic sedimentary rocks, northern Appalachians, Québec; Canadian Journal of Earth Sciences, v. 25, no. 11, p. 1777-1790, November 1988.

1989-90

Beaudoin, G., Schrijver, K., Marcoux, E. and Calvez, J.Y., A vein and disseminated Ba-Pb-Zn deposit in the Appalachian thrust belt, St. Fabien, Québec; Economic Geology, v. 84, no. 4, p. 799-816, 1989.

b) Les dossiers publics/
Open Files

1987-88

Schrijver, K., Metallogenic studies of Pb-Zn-Ba occurrences in the Lower and Middle Paleozoic sedimentary rocks of the Lower St. Lawrence and northern Gaspésie area, Québec; Geological Survey of Canada, Open File 1495, 192 p., 1 map (1:500,000), September 1987.

d) Les présentations orales/
Oral Presentations

1987-88

Beaudoin, G., Bergeron, M. and Schrijver, K., Relations between REE of hostrocks and hydrothermal carbonates of barite-galena mineralization, St. Fabien, Québec, at the GAC/MAC Joint Annual Meeting, Saskatoon, May 25, 1987; abstract published in GAC/MAC Program with Abstracts, v. 12, p. 24, 1987.

1988-89

Beaudoin, G., Schrijver, K. and Marcoux, E., A vein and disseminated Ba-Pb-Zn deposit in

the Québec Appalachians, at the GAC/MAC/CSPG Joint Annual Meeting, St. John's, Newfoundland, May 25, 1988; abstract published in GAC/MAC/CSPG Program with Abstracts, v. 13, p. A7, 1988.

e) Les thèses/Theses

1987-88

Beaudoin, G., La mine Roy-Ross, St. Fabien, Québec: Structure, pétrographie, terres rares et isotopie de plomb de la mineralisation de barite-galène-sphalérite; Mémoire de maîtrise, Université Laval, Québec, avril 1987.

1.6 Sédimentologie des roches
siluriennes/Sedimentology
of Silurian rocks
(K.L. Currie)

a) Les publications/Publications

1984-85

David, J., Chabot, N., Marcotte, C., Lajoie, J. and Lespérance, P.J., Stratigraphy and sedimentology of the Cabano, Pointe aux Trembles, and Lac Raymond formations, Témiscouata and Rimouski counties, Quebec; in Current Research, Part B, Geological Survey of Canada, Paper 85-1B, p. 491-497, 1985. (Aussi disponible en français)

1985-86

David, J. and Gariépy, C., Geochemistry of the Lower Silurian Pointe aux Trembles and Lac Raymond formations, central Québec Appalachians: A preliminary report; in Current Research, Part B, Geological Survey of Canada, paper 86-1B, p. 131-140, 1986.

1986-87

David, J. and Gariépy, C., Rare-earth element geochemistry of sedimentary sequences from the Lower St. Lawrence, Québec Appalachians; in Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 633-642, 1987.

1990-91

David, J. and Gariépy, C., Early Silurian orogenic andesites from the central Québec Appalachians; Canadian Journal of Earth Sciences, v. 27, no. 5, p. 632-643, 1990.

c) Les présentations visuelles/ Posters

1989-90

David, J. and Gariépy, C., Lower Silurian orogenic andesites from the central Québec Appalachians: Petrogenesis and potential tectonic implications, at the GAC/MAC Joint Annual Meeting, Montreal, Québec, May 15, 1989; abstract published in GAC/MAC Program with Abstracts, v. 14, p. A40, 1989.

d) Les présentations orales/ Oral Presentations

1988-89

David, J., Lajoie, J. and Lespérance, P.J., A tectonically active successor basin: Recording the transition from the Taconian to the Acadian orogenic episodes, central Québec Appalachians, at the GAC/MAC/CSPG Joint Annual Meeting, St. John's, Newfoundland, May 23, 1988; abstract published in GAC/MAC/CSPG Program with Abstracts, v. 13, p. A29, 1988.

1.7 **Géochimie des gîtes associés aux granites/ Geochemistry of granite-associated deposits**
(F. Robert)

a) Les publications/Publications

1985-86

Williams-Jones, A.E., Samson, I.M. and Linnen, R.L., Preliminary results of a study of the ores, wall-rock alteration, and fluid inclusions at the Madeleine copper mine, Gaspé, Québec; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 239-249, 1986.

1988-89

Van Bosse, J.Y. and Williams-Jones, A.E., Chemographic relationships of biotite and cordierite in the McGerrigle thermal aureole, Gaspé, Québec; Journal of Metamorphic Geology, v. 6, p. 65-75, 1988.

Williams-Jones, A.E. and Ferreira, D.R., Fluid inclusion studies and the origin of cupriferous calc-silicate hornfels at Patapédia, Gaspésie, Québec; in Current Research, Part B, Geological Survey of Canada, Paper 89-1B, p. 83-92, 1989.

1989-90

Williams-Jones, A.E. and Samson, I.M., A sulfur isotope study of the granite-related, Madeleine copper deposit, Gaspé, Québec: An example of a sedimentary sulfur source; Economic Geology, v. 84, no. 6, p. 1507-1514, September-October, 1989.

Williams-Jones, A.E., Samson, I.M. and Linnen, R.L., Fluid evolution and its role in the

genesis of the granite-related Madeleine copper deposit, Gaspé, Quebec; Economic Geology, v. 84, no. 6, p. 1515-1524, September-October, 1989.

Williams-Jones, A.E. and Ferreira, D.R., Thermal metamorphism and H₂O-Co₂-NaCl immiscibility at Patapedia, Quebec: Evidence from fluid inclusions; Contributions to Mineralogy and Petrology, v. 102, no. 2, p. 247-254, 1989.

c) Les présentations visuelles/ Posters

1985-86

Williams-Jones, A.E., Alteration, fluid inclusion and isotope studies at the Madeleine Copper Mine, Gaspé, Québec, at the GAC/MAC Joint Annual Meeting, London, May 16, 1985; abstract published in GAC/MAC Program with Abstracts, v. 9, p. 116, 1985.

d) Les présentations orales/ Oral Presentations

1986-87

Williams-Jones, A.E., Linnen, R.L. and Samson, I.M., Hydrothermal fluid evolution in the Madeleine copper deposit, Gaspé, Québec, at the 88th Annual General Meeting of the Canadian Institute of Mining and Metallurgy, Montreal, May 12, 1986; abstract published in CIM Bulletin, v. 79, no. 887, p. 48, 1986.

1988-89

Samson, I.M. and Williams-Jones, A.E., Fluid compositions associated with syn-contact metamorphic copper mineralization, mine Madeleine,

Québec, Canada, at the Annual Meeting of the Geological Society of America, Denver, Colorado, November 1, 1988; abstract published in GSA Abstracts with Programs, v. 20, no. 7, p. A282, 1988.

Wares, R.P. and Williams-Jones, A.E., Lithostratigraphic controls on skarn mineralization in the northern Gaspé Peninsula, Québec, at the GAC/MAC/CSPG Joint Annual Meeting, St. John's, Newfoundland, May 25, 1988; abstract published in GAC/MAC/CSPG Program with Abstracts, v. 13, p. A132, 1988.

Williams-Jones, A.E. and Samson, I.M., Unusual sulfur isotopic values in chalcopyrite from the granite associated Madeleine copper deposit, Québec, Canada, at the Annual Meeting of the Geological Society of America, Denver, Colorado, November 1, 1988; abstract published in GSA Abstracts with Programs, v. 20, no. 7, p. A94, 1988.

1990-91

Samson, I.M. and Williams-Jones, A.E., C-O-H-N-salt fluids associated with contact metamorphism, McGerrigle Mountains, Quebec: A Raman spectroscopic study, at the GAC/MAC Joint Annual Meeting, May 16, 1990, Vancouver, British Columbia; abstract published in GAC/MAC Program with Abstracts, v. 15, p. A116, 1990

1.8 Soutien analytique/ Analytical support (K.L. Currie)

Projet de soutien, aucun produit.

Support project, no outputs.

1.9 Lithogéochimie des environs des gisements Candego et Madeleine/ Litho geochemistry, Candego and Madeleine Mines region (D.F. Sangster)

a) Les publications/Publications

1985-86

Stevens, K., Metallogenic studies in the Candego and Madeleine mines area, Gaspésie, Québec: A progress report; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 435-437, 1986.

b) Les dossiers publics/ Open Files

1986-87

Stevens, K., Mineral zoning and fluid inclusion studies in the Candego/Madeleine mines area, Gaspé, Québec; Geological Survey of Canada, Open File 1407, 73p., January 1987.

c) Les présentations visuelles/ Posters

1985-86

Stevens, K. and Procyshyn, E., Fluid inclusion and mineral zoning studies in the Candego mine area, Gaspé, Québec, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 22-23, 1986.

1.10 Études de la maturation des illites/Illite maturation studies (K.L. Currie)

Aucun produit.

No outputs.

1.11 Métallogénie, Mine Ross/ Metallogeny, Ross Mine (D.F. Sangster)

a) Les publications/Publications

1988-89

Schrijver, K. and Rhéaume, P.A., A proposed genetic model for epigenetic Ba-Pb-Zn occurrences not associated with igneous rocks, Taconic Thrust Belt, Québec; in Current Research, Part B, Geological Survey of Canada, Paper 89-1B, p. 29-37, 1989.

1.12 Centres hydrothermaux/ Mineral zoning (D.F. Sangster)

b) Les dossiers publics/ Open Files

1988-89

Stevens, K., Fluid flow and mineral deposition northwest of the McGerrigle granitic pluton, central Gaspé region, Québec; Geological Survey of Canada, Open File 1889, 90p., March 1989.

Stevens, K., Vein mineral zoning in the Mines Gaspé ore system, Gaspé, Québec; Geological Survey of Canada, Open File 1890, 45p., March 1989.

1989-90

Stevens, K., Continuation of a metallogenic/exploration study for granite-associated mineralized regions in the Gaspé Peninsula, Québec; Geological Survey of Canada, Open File 2064, 72p., September 1989.

1.13 Levés audio magnéto-telluriques à source contrôlée [CSAMT], Dôme de Lemieux/Controlled Source Audio Magnetotelluric [CSAMT] (A.G. Jones)

c) Les présentations visuelles/ Posters

1989-90

Boerner, D.E., McNeice, G.W., Kurtz, R.D. and Jones, A.G., Gravity and electromagnetic investigations over the Lemieux dome, Gaspésie, Québec, at the Geological Survey of Canada Minerals Colloquium, Ottawa, January 17-18, 1990; abstract published in Geological Survey of Canada Minerals Colloquium Program with Abstracts, p. 15, 1990.

d) Les présentations orales/ Oral presentations

Boerner, D.E., Jones, A.G., Kurtz, R.D. and McNeice, G.W., High resolution deep probing electromagnetic study of the Lemieux Dome, Gaspé, at the Canadian Geophysical Union Meeting, Montreal, May 17-19, 1989.

1.14 Études d'images LANDSAT/ LANDSAT imagery (D.F. Sangster)

a) Les publications/Publications

1989-90

Rencz, A.N. and Sangster, D.F., Characterizing vegetation response to an alteration halo using LANDSAT Thematic Mapper imagery and aeromagnetic data in the Murdochville area, Gaspésie, Quebec; in Current Research Part

B, Geological Survey of Canada, Paper 90-1B, p. 91-94, 1990.

2 SOUS-PROGRAMME DE L'EXPLORATION GÉOCHIMIQUE ET DE LA GÉOLOGIE DU QUATERNAIRE

EXPLORATION GEOCHEMISTRY AND QUATERNARY GEOLOGY SUBPROGRAM

2.1 Géochimie des dépôts de surface, région de Matapédia/Geochemistry of surficial deposits, Matapedia area (Y.T. Maurice)

a) Les publications/Publication

1989-90

Bernier, M.A. and Webber, G.R., Mineralogical and geochemical analysis of shallow overburden as an aid to gold exploration in southwestern Gaspésie, Québec, Canada; Journal of Geochemical Exploration, v. 34, p. 115-145, 1989.

b) Les dossiers publics/ Open Files

1987-88

Bernier, M.A., Elson, J.A. and Webber, G.R., Overburden geochemistry and possible relations to gold-bearing alluvial deposits, southwest Gaspésie, Québec; Geological Survey of Canada, Open File 1586, August 24, 1987.

c) Les présentations visuelles/ Posters

1988-89

Bernier, M.A. and Webber, G.R., Shallow overburden mineralogical and geochemical analysis as an

aid to gold exploration in southwestern Gaspésie, Québec, Canada, at the Canadian Institute of Mining and Metallurgy's Prospecting in Areas of Glaciated Terrain Symposium, Halifax, Sept 1-3, 1988.

e) Les thèses/Theses

Bernier, M.A., Geomorphology and shallow overburden elemental and heavy mineral studies in southwest Gaspésie, Quebec - possible aids to gold exploration; unpublished M.Sc. thesis, McGill University

2.2 Dispersion glaciaire, région de Mont-Joli/ Glacial dispersion Mont Joli area (J.J. Veillette)

a) Les publications/Publications

1984-85

Prichonnet, G. et Desmarais, L., Remarques sur les mouvements et la dispersion glaciaire du Wisconsinien en Gaspésie (Québec); dans Recherches en cours, Partie B, Commission géologique du Canada, Étude 85-1B, p. 531-540, 1985.

d) Les présentations orales/ Oral Presentations

1987-88

Prichonnet, G., Glacial transport, mineral content of tills in western Gaspé Peninsula - paleogeography during the late Wisconsin glaciation, at the GAC/MAC Joint Annual Meeting, Saskatoon, May 26, 1987; abstract published in GAC/MAC Program with Abstracts, v. 12, p. 82, 1987.

Prichonnet, G., Daigneault, R.A., de Corta, H., Bisson, L., Gagnon, P. and Desmarais, L., Relationships between facies and dispersal trains in the Late Wisconsinan-Early Holocene glacial deposits, at the International Union for Quaternary Research, XII International Congress, Ottawa, August 2, 1987; abstract published in INQUA 1987 Programme with Abstracts, p. 245, 1987.

2.3 Géochimie des minéraux lourds/Heavy mineral geochemistry (Y.T. Maurice)

a) Les publications/Publications

1985-86

Maurice, Y.T., Distribution and origin of alluvial gold in southwest Gaspésie, Québec; in Current Research, Part B, Geological Survey of Canada, Paper 86-1B, p. 785-795, 1986.

1990-91

Maurice, Y.T., Possible "new" metallogenic district in the Appalachians of Quebec: The Esprit-Saint anomaly may be the first indication of a vast deposit; Engineering and Mining Journal, v. 191, no. 9, September 1990. (in press)

b) Les dossiers publics/ Open Files

1988-89

Maurice, Y.T., Résultats et interprétation d'un levé géochimique des minéraux lourds, région du Bas Saint-Laurent, Québec (SNRC 21N/6, 7, 9, 10, 11, 14, 15, 16; 22C/1, 2, 3) - version préliminaire, résultats

partiels; Commission géologique du Canada, Dossier public 2036, 8p., 1 carte (1:250,000), 29 mai 1989.

Maurice, Y.T., Résultats et interprétation d'un levé géochimique des minéraux lourds, région du Bas Saint-Laurent, Québec / Results and interpretation of a heavy mineral geochemical survey in the Lower St. Lawrence region of Quebec (SNRC/NTS 21N/6, 7, 9, 10, 11, 14, 15, 16; 22C/1, 2, 3); Commission géologique du Canada/Geological Survey of Canada, Dossier public/Open File 2036, 80p., 13 cartes/maps (1:250,000), 31 juillet/July 1989.

c) Les présentations visuelles/ Posters

1988-89

Maurice, Y.T., Regional geochemical exploration in the Lower St. Lawrence region, Québec, using heavy mineral technology, at the 57th Annual General Meeting and Convention of the Prospectors and Developers Association of Canada, Toronto, March 5-8, 1989.

Maurice, Y.T., Exploration géochimique régionale par la technologie des minéraux lourds, dans la région du Bas Saint-Laurent, Québec, présenté à 1er Congrès de l'Association professionnelle des géologues et des géophysiciens du Québec, Val d'Or, Québec, 30-31 mars 1989.

1989-90

Maurice, Y.T., Géochimie des minéraux lourds, région du Bas Saint-Laurent, présenté à Séminaire d'Information 1989

Ministère de l'Énergie et des Ressources du Québec, Québec, novembre 1989.

Maurice, Y.T., Regional heavy mineral geochemistry in the Lower St. Lawrence (Appalachian) region of Quebec, at the Geological Survey of Canada Current Activities Forum 1990, Ottawa, January 15-17, 1990 and at the Geological Survey of Canada Minerals Colloquium, Ottawa, January 17-18, 1990; abstract published in Geological Survey of Canada Forum 1990 Program with Abstracts, p. 15-16 and in Geological Survey of Canada Minerals Colloquium Program with Abstracts, p.26, 1990.

Maurice, Y.T., Regional geochemical exploration in the Lower St. Lawrence region, Québec using heavy mineral technology, at the 58th Annual General Meeting and Convention of the Prospectors and Developers Association of Canada, Toronto, March 4-7, 1989.

d) Les présentations orales/ Oral Presentations

1989-90

Maurice, Y.T., A possible "new" metallogenic district in the Québec Appalachians, outlined by regional heavy mineral geochemistry, at the 58th Annual General Meeting of the Prospectors and Developers Association of Canada, Toronto, March 14, 1990; abstract in Bulletin of the Canadian Institute of Mining and Metallurgy, v. 83, no. 939, p. 116-117, July 1990.

Maurice, Y.T., Un nouveau district métallogénique possible dans les Appalaches du Québec, identifié par la géochimie des minéraux lourds; présentation orale au 21ème congrès annuel de l'Association professionnelle des géologues et des géophysiciens du Québec, Sainte-Foy, 30 mars 1990.

1990-91

Maurice, Y.T., Nouvelles cibles d'exploration dans le comté de Rimouski d'après une étude des minéraux lourds alluvionnaires; conférence invitée présentée au Congrès de l'Association des prospecteurs gaspésiens, 13 au 15 juin 1990.

2.4 Lithogéochimie régionale/ Regional litho geochemistry (Y.T. Maurice)

e) Les thèses/Theses

1987-88

Gagné, B., Sedimentology and geochemistry of the B1 member of the Middle Ordovician Cloridorme Formation, Gaspé, Canada; unpublished B.Sc. thesis, Department of Geology, University of Ottawa, 173 p.

2.5 Dispersion glaciaire, secteur central/Glacial dispersion, central Gaspé (J.J. Veillette)

a) Les publications/Publications

1985-86

David, P.P. and Bédard, P., Stratigraphy of the McGerrigle mountains granite trains of Gaspésie; in Current Research, Part B, Geological Survey of Canada, Paper 86-1B, p. 319-328,

1986.

1987-88

David, P.P., Bédard, P. and Charbonneau, R., Stratigraphy and geochemistry of the McGerrigle granite trains of Gaspésie, Québec; in Current Research, Part B, Geological Survey of Canada, Paper 88-1B, p. 187-199, 1988.

c) Les présentations visuelles/ Posters

1985-86

David, P.P., Bédard, P., Chauvin, L. and Lasalle, P., The McGerrigle mountain granite trains of Gaspésie, Québec, at the Geological Survey of Canada, Current Activities Forum 1986, Ottawa, January 22-23, 1986.

d) Les présentations orales/ Oral Presentations

1987-88

David, P.P. and Lasalle, P., Glaciation in Gaspésie: Facts and hypotheses, at the International Union for Quaternary Research, XII International Congress, Ottawa, August 1987; abstract published in INQUA 1987 Programme with Abstracts, p. 153, 1987.

1989-90

Bédard, P. et David, P.P., Érosion glaciaire et préservation de saprolites sur les hauts plateaux de la Gaspésie centrale, présenté au réunion annuelle de l'Association géologique du Canada et l'Association minéralogique du Canada, Montreal, Québec, 17 mai 1989; résumé publié dans le programme et résumés, v. 14, p. A130, 1989.

Charbonneau, R. et David, P.P., Effet de l'inversion de l'écoulement glaciaire sur la dispersion clastique en Gaspésie, Québec, présenté au réunion annuelle de l'Association géologique du Canada et l'Association minéralogique du Canada, Montreal, Québec, 17 mai 1989; résumé publié dans le programme et résumés, v. 14, p. A130, 1989.

1990-91

Charbonneau, R. and David, P.P., Vertical variations in the lithological composition of tills in central Gaspésie, Quebec, at the GAC/MAC Joint Annual Meeting, May 17, 1990, Vancouver, British Columbia; abstract published in GAC/MAC Program with Abstracts, v. 15, p. A23, 1990.

2.6 Compilation de la carte du Quaternaire/Quaternary compilation map (J.J. Veillette)

a) Les publications/Publications

1985-86

Cloutier, E.M. et Corbeil, P., Géologie du Quaternaire de la région du Mont Alexandre, Gaspésie, Québec; dans Recherches en cours, Partie B, Commission géologique du Canada, Étude 86-1B, p. 869-873, 1986.

1987-88

Veillette, J.J., Observations sur la géologie glaciaire du nord-est de la Gaspésie, Québec; dans Recherche en cours, Partie B, Commission géologique du Canada, Étude 88-1B, p. 209-220, 1988.

b) Les dossiers publics/Open Files

1985-86

Cloutier, E.M. et Corbeil, P., Géologie des formations en surface, Mont Alexandre, Gaspésie, Québec (22A/11); Commission géologique du Canada, Dossier Public 1255, 1 carte (1:50,000), mars 1986.

1987-88

Veillette, J.J., Geologie des formations en surface, région de Cloridorme, Gaspésie, Québec (22H/2); Commission géologique du Canada, Dossier Public 1508, 1 carte (1:50,000), juin 1987.

c) Les présentations visuelles/Posters

1988-89

Veillette, J.J. et Cloutier, M., La carte des formations en surface de la Gaspésie, Québec/Surficial geology map of Gaspésie, Québec, présenté au 6ième de l'Association québécoise pour l'étude du Quaternaire/presented at the 6th Congress of the Quebec Association for the study of the Quaternary, Rimouski, Québec, 22-25 septembre/September 1988.

Veillette, J.J. and Cloutier, M., Surficial geology map of Gaspésie, Québec, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 17-18, 1989; abstract published in Geological Survey of Canada, Current Activities Forum 1989, Program with Abstracts, p. 23, 1989.

2.7 Dispersion glaciaire, Bas Saint-Laurent/Glacial dispersion Lower St. Lawrence (J.J. Veillette)

a) Les publications/Publications

1988-89

Rappol, M. and Russell, H., Glacial dispersal of Precambrian Shield and local Appalachian rocks in the lower St. Lawrence region in western Gaspésie, Québec, and in adjacent New Brunswick; in Current Research, Part B, Geological Survey of Canada, Paper 89-1B, p. 127-136, 1989.

1990-91

Rappol, M., Glacial history of Lower St. Lawrence and western Gaspésie, Québec; Geological Survey of Canada Paper. (in press)

3 SOUS-PROGRAMME DE LA GÉOPHYSIQUE

AIRBORNE GEOPHYSICS SUBPROGRAM

**3.1 Développement du système gradiométrique hélicoptéré/
Development of helicopter gradiometer system
(E.E. Ready)**

a) Les publications/Publications

1986-87

Hood, P.J. and Teskey, D.J., Helicopter-borne aeromagnetic gradiometer surveys: A progress report; in Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 935-938, 1987.

d) Les présentations orales/
Oral Presentations

1985-86

Teskey, D.J. and Hood, P.J., Aeromagnetic gradiometer surveys in mountainous terrain, at the International Meeting on Potential Fields in Rugged Topography, Lausanne, Switzerland, July 30 to August 2, 1985.

1986-87

Hood, P.J. and Teskey, D.J., Helicopter-borne aeromagnetic gradiometer surveys: A progress report, at the 56th Annual Meeting of the Society of Exploration Geophysicists, Houston, Nov 2-6, 1986; extended abstract published in SEG Annual Meeting Program with Abstracts p. 152-155, 1986.

3.2 Gradiométrie et levés VLF aéroportés/Airborne gradiometer and VLF surveys (E.E. Ready)

a) Les publications/Publications

1986-87

Geological Survey of Canada, High resolution aeromagnetic total field and vertical gradiometer surveys of area in the Gaspésie Peninsula, Québec; 1:20,000 scale aeromagnetic total field maps 21068G to 21077G, 1:20,000 scale vertical gradient maps 41068G to 41077G, 1:50,000 scale combined aeromagnetic total field and VLF EM total field profiles C21078G to C21081G, and 1:50,000 scale combined aeromagnetic vertical gradient and VLF EM quadrature profiles C41078G to C41081G, October 1, 1986.

1987-88

Geological Survey of Canada, High resolution aeromagnetic

total field and vertical gradiometer surveys in Gaspésie peninsula, Québec; 1:20,000 scale aeromagnetic total field maps 21187G to 21198G, and 1:20,000 scale vertical gradient maps 41187G to 41198G, May 1987.

Geological Survey of Canada, High resolution aeromagnetic total field and vertical gradiometer surveys in Gaspésie peninsula, Québec; 1:50,000 scale aeromagnetic total field maps C21199G to C21202G, and 1:50,000 scale vertical gradient maps C41199G to C41202G, July 1987.

c) Les présentations visuelles/ Posters

Ready, E., Hood, P.J. and Maurice, Y.T., Helicopter-borne gradiometer/VLF EM survey of the Chic-Choc mountains, Gaspésie, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 20-21, 1987.

3.3 Interprétation des cartes aéromagnétiques/ Interpretation of aeromagnetic maps (Y.T. Maurice)

b) Les dossiers publics/ Open Files

1989-90
Géophysique Sigma Inc.,
Interprétation des cartes
aéromagnétiques à haute
résolution (champ total et
gradient vertical) du centre-
nord de la Gaspésie, Québec;
Commission géologique du Canada,
Dossiers Publics 2202, 200 p., 1
carte à l'échelle 1:250,000,
mars 1990.

**3.4 Levés combinés
gradiométrie/
électromagnétisme/
Combined gradiometer/EM
surveys
(E.J. Schwarz)**

a) Les publications/Publications

1989-90
Geological Survey of Canada,
Aeromagnetic total field and
vertical gradiometer maps of the
Port Daniel-Pabos area (22A/2,
3, 6, 7), Gaspésie, Québec;
1:20,000 scale total field map
(North sheet)-21499G and (South
sheet)-21500G; 1:20,000 scale
vertical gradient map (North
sheet)-41499G and (South sheet)-
41500G, March 1990.

b) Les dossiers publics/
Open Files

1989-90
Geological Survey of Canada,
vertical magnetic gradient, EM
in phase/quadrature components
(four frequencies) and VLF
line/ortho profiles along flight
lines obtained by helicopter-
borne survey of the Port Daniel-
Pabos area, Gaspésie, Québec;
Geological Survey of Canada,
Open File 2206, (1:20,000
scale), March 1990.