

GEOLOGICAL SURVEY OF CANADA



COMMISSION GÉOLOGIQUE DU CANADA

OPEN FILE 2146

**CANADA - NOVA SCOTIA MINERAL DEVELOPMENT
AGREEMENT, LIST OF OUTPUTS PRODUCED BY THE
GEOLOGICAL SURVEY OF CANADA DURING THE YEARS
1984 THROUGH 1989**

**Mineral Development Program Office
Geological Survey of Canada**

Contribution to the Canada - Nova Scotia Mineral Development Agreement 1984-1989



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Nova Scotia



**Department of
Mines and Energy**



Energy, Mines and
Resources Canada

Énergie, Mines et
Ressources Canada

Canada

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INTRODUCTION

The Canada - Nova Scotia Mineral Development Agreement 1984-89 (MDA), signed by federal and provincial ministers in June 1984, is one of many subsidiary agreements under the Canada - Nova Scotia Economic and Regional Development Agreement (ERDA).

To help strengthen and diversify Nova Scotia's mineral industry, the Geological Survey of Canada (GSC) implemented a 5-year program of geoscientific projects that would provide new data and ideas to the mineral exploration community.

This Open File presents, in bibliographic form, the cumulative output of that program from 1984 through 1989. The Open File was compiled by D.G. Richardson and W.H. Poole and outputs have been assembled for each project under four categories: a) Publications, b) Open Files, c) Posters and d) Oral Presentations. Within each category, entries are arranged by fiscal year. Bibliographic information was obtained from project participants. A preliminary version of this unedited Open File has been examined by GSC participants. The name of the GSC project leader appears in brackets.

CANADA-NOVA SCOTIA MINERAL DEVELOPMENT AGREEMENT (1984-1989)

**LIST OF OUTPUTS
PRODUCED BY GEOLOGICAL SURVEY OF CANADA
DURING YEARS 1984 through 1989**

Outputs have been divided into:

a) Publications b) Open Files c) Posters d) Oral Presentations

1.1 SEDIMENTARY BASINS SUBPROGRAM

1.1.1 Seismic surveys, Cumberland Basin, Springhill and Offshore Port Hood (J.A.M. Hunter)

a) Publications

1986-87

Hunter, J.A.M. and Bromley, D.S., Reflection seismic studies: Cumberland Basin and western Cape Breton Island; in Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Information Series No. 12, p. 194-195, November, 1986.

1987-88

Bromley, D.S., Seismic surveys: Cumberland Basin and offshore Cape Breton Island, Nova Scotia; in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 235-237, 1987.

1988-89

Calder, J.H. and Bromley, D.S., Structure and correlation of coal-bearing strata of the Athol syncline, Cumberland Basin : Results of recent seismic studies; in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 9-13, 1988.

1989-90

Hacquebard, P.A., Gillis, K.S. and Bromley, D.S., Re-evaluation of the coal resources of Western Cape Breton Island, Nova Scotia Department of Mines and Energy, Paper 89-3, 47 p., 1989.

b) Open Files

1987-88

Bromley, D., Hill, S., and Greenley, R., Marine seismic surveys (1978-85) for Mabou, Port Hood and Inverness areas, offshore Western Cape Breton Island; Geological Survey of Canada, Open File 1717, February 1988.

Bromley, D., Seismic data, Cumberland Basin, Nova Scotia; Geological Survey of Canada, Open File 1734, March 1988.

c) Posters

1985-86

Bromley, D., Preliminary seismic studies: Cumberland Basin, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 1985; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p. 122-123, 1985.

1986-87

Bromley, D.S. and Hunter, J.A.M., Seismic studies - Cumberland Basin, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986.

1987-88

Bromley, D.S. and Calder, J.H., Seismic surveys: Cumberland Basin and offshore Cape Breton Island, Nova Scotia, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 1988.

1.1.2 Geophysical tests, coal (P.G. Killeen)

No Outputs

1.1.3 Inventory of coal exploration data (J.D. Hughes)

a) Publications

1985-86

Hughes, J.D. and MacNeil, D.J., Computerization of coal exploration data for Nova Scotia; in Nova Scotia Department of Mines, Information Series No. 9, p. 135-136, 1985; and in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p.17-19, 1986.

1986-87

Hughes, J.D., MacNeil, D.J. and Watson, P., Computerization of coal exploration data for Nova Scotia: a joint federal-provincial project; in Current Research, Part B, Geological Survey of Canada, Paper 86-1B, p. 417-420, 1986; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 12, p. 201, November, 1986.

1987-88

Hughes, J.D., Watson, P.D. and MacNeil, D.J., Computerization of coal exploration data for Nova Scotia; in Nova Scotia Department of Mines and Energy, Report of Activities, Part A, Report 87-5, p. 249, 1987.

1988-89

Hughes, J.D., Watson, P.D. and MacNeil, D.J., Computerization of coal exploration data for Nova Scotia; in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 31-32, 1988.

c) Posters

1986-87

Watson, P., Neuman, J., MacNeil, D.J. and Hughes, J.D., Coal geology computerization, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986.

1987-88

Watson, P.D., Newman, J.M., Hughes, J.D. and MacNeil, D.J., Coal geology computerization, Nova Scotian coalfields, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

1988-89

Hughes, J.D., MacNeil, D.J. and Watson, P.D., Computer model of the West Sydney coalfield, Nova Scotia, at the Geological Survey of Canada Forum on oil and gas activities in Canada, Calgary, February 27-28, 1989.

d) Oral Presentations

1985-86

Hughes, J.D., Outline of coal data inventory project, presented to Nova Scotia Department of Mines and Energy and the Cape Breton Development Corporation personnel, Halifax, August 1985.

1986-87

Hughes, J.D., Coal data inventory and computer modelling, Sydney Coalfield, presented to the Cape Breton Development Corporation personnel, Sydney, 1986.

1988-89

Hughes, J.D., Integrated geological coalfield computer models: Development, use and role in optimal resource assessment, presented to the Cape Breton Geological Society, Sydney, 1988.

1.1.4 Stellarton Basin oil shale sedimentology (W.H. Poole)

(Project transferred; Nova Scotia Department of Mines and Energy to report on outputs.)

1.2 MINERAL SECTOR SUBPROGRAM

1.2.1 MINERAL DEPOSITS STUDIES

1.2.1.1 Metallogeny of Meguma Group (A.L. Sangster)

a) Publications

1985-86

Bonham-Carter, G.F., Rencz, A.N., and Harris, J.R., Spatial relationship of gold occurrences with lineaments derived from LANDSAT and SEASTAT imagery, Meguma Group, Nova Scotia; in Proceedings of Remote Sensing for Exploration Geology, Fourth Thematic Conference, San Francisco, p. 755-768, 1985.

Haynes, S.L., Reilly, B.A. and Kiely, L.A., Structural setting of the Mile Lake gold prospect, Guysborough County, Nova Scotia; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 141-150, 1986.

Mawer, C.K., Origin of bedding-concordant auriferous quartz-veins, Meguma Terrane, Nova Scotia; in Maritime Sediments and Atlantic Geology, v. 21, nos. 1, 2, 3, p. 1-9, 1985.

Zentilli, M., Graves, M.C., Mulja, T., and MacInnes, I., Geochemical characterization of the Goldenville-Halifax transition of the Meguma Group of Nova Scotia: A preliminary report; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 423-429, 1986; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 237, 1986.

1986-87

Graves, M.C. and Zentilli, M., Geochemical characteristics of the Goldenville-Halifax transition of the Meguma Group of Nova Scotia: Progress report; in Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Information Series No. 12, p. 170, November, 1986.

1987-88

Graves, M.C. and Zentilli, M., The lithochemistry of metal-enriched coticles in the Goldenville-Halifax transition zone of the Meguma Group, Nova Scotia; in Current Research, Part B, Geological Survey of Canada, Paper 88-1B, p. 251-261, 1988.

Harris, J.R., A comparison of lineaments interpreted from remotely sensed data and airborne magnetics and their relationship to gold deposits in central Nova Scotia; in Proceedings of the 5th Thematic Conference on Remote Sensing for Exploration Geology, v. II, p. 557-576, 1987.

Mawer, C.K., Mechanics of formation of gold-bearing quartz veins, Nova Scotia, Canada; Tectonophysics, v. 135, p. 99-119, 1987.

Sangster, A.L., Book review of "Turbidite-hosted gold deposits, Geological Association of Canada Special Paper 32" by J.D. Keppie, R.W. Boyle and S.J. Haynes, (eds.); *Economic Geology*, v., 83 no. 7, p. 1972-1973, 1987.

1988-89

Bonham-Carter, G.F., Agterberg, F.P. and Wright, D.F., Integration of geological data sets for gold exploration in Nova Scotia; *in* *Photogrammetric Engineering and Remote Sensing*, v. 54, no. 11, p. 1585-1592, 1988.

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Harris, J.R., Bonham-Carter, G.F., Rencz, A., Sangster, A.L., and Bretzlaff, R., Lineament analysis of the Cobequid Highlands, Nova Scotia, using Seasat, Landsat and SPOT Data; *in* *Proceedings of the 11th Canadian Symposium on Remote Sensing, June 22-25, 1987, University of Waterloo, Ontario*, v. 1, p. 311-327, 1989.

Kerswill, J.A., Lithogeochemical indicators of gold potential in the eastern Meguma terrane of Nova Scotia : Second progress report; *in* *Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3*, p. 215-217, 1988.

Wright, D.F., Bonham-Carter, G.F. and Rogers, P.J., Spatial data integration of lake sediment geochemistry, geology and gold occurrences, Meguma terrane, eastern Nova Scotia; *in* *Proceedings of the 8th International Symposium on Prospecting in Areas of Glaciated Terrain, CIM-IMM, Halifax, Nova Scotia*, p. 501-515, 1988.

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Pickerill, R.K. and Williams, P.F., Deep burrowing in the early Palaeozoic deep sea: Examples from the Cambrian(?) - Early Ordovician Meguma Group of Nova Scotia; *Canadian Journal of Earth Sciences*, v. 26, no. 5, p. 1061-1068, 1989.

b) Open Files

1988-89

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Steneker, M. and Bonham-Carter, G.F., Computer program for converting arc-node vector data to Raster format; Geological Survey of Canada, Open File 1767, 47p., 1 diskette, May 1988.

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1985-86

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Zentilli, M., Graves, M.C., Mulja, T. and MacInnes, I, Geochemical characterization of the Goldenville-Halifax transition of the Meguma Group of Nova Scotia: Preliminary Report, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-28, 1985; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p.112, 1985.

Zentilli, M., MacInnis, I.N. and Reynolds, P.M., Geochemistry of lead-zinc-manganese mineralization associated with the Goldenville-Halifax transition of the Cambro-Ordovician Meguma Group at Eastville, Nova Scotia, at the GAC/MAC Joint Annual Meeting, Fredericton, May 17, 1985; abstract published in GAC/MAC Program with Abstracts, v. 10 , p. A70, 1985.

1986-87

Bonham-Carter, G.F., Rencz, A.N., Wright, D.F., Keppie, J.D., Rogers, P.J. and Stea, R.R., Eastern Nova Scotia data integration: A progress report, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities; abstract published in Information Series 12, p. 189, November 1986.

Graves, M.C. and Zentilli, M., Goldenville-Halifax transition zone, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986.

Hy, C. and Williams, P.F., Meguma quartz veins in the Tangier area, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, November 1986.

Hy, C. and Williams, P.F., Timing of quartz vein emplacement in the Meguma terrane, at Gold '86-an International Symposium on the Geology of Gold Deposits, Toronto, September 28-October 1, 1986; abstract published in Gold'86 Poster Paper Abstracts edited by A.M. Chater, p. 75-76, 1986.

1987-88

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Graves, M., Coticules and lithochemistry of the GHT, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

Graves, M.C., MacInnes, I. and Zentilli, M., The role of organic carbon in formation of carbonate carbon in the Meguma Group, southern Nova Scotia, at the Atlantic Geoscience Society, Colloquium '88, Antigonish, Nova Scotia, February 1988; abstract published in *Maritime Sediments and Atlantic Geology*, v. 24, no. 2, p. 197, 1988.

Graves, M.C. and Zentilli, M., Geochemical characterization of the Goldenville-Halifax Formation transition of the Meguma Group of Nova Scotia: Progress report III, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 217-219, 1987.

Hy, C. and Williams, P., Structural geology of the Tangier area, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 12, p. 202-204, November 1986.

Kerswill, J.A., Mineralogy and chemistry of metawackes and slates as a guide to gold in the eastern Meguma terrane of Nova Scotia: A progress report, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Report 87-5, p. 209-212, 1987.

Sangster, A.L., Sulphur isotope studies, Meguma Group, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987; extended abstract in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Paper 87-5, p. 207-208, 1987.

Wright, D.F., Bonham-Carter, G.F., Rencz, A.N., Rogers, P.J., Keppie, J.D., Stea, R. and Harris, J.R., Preliminary results from a spatial data integration project in eastern Nova Scotia using a microbased geographic information system, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987; abstract published in Nova Scotia Department of Mines, Report of Activities 1987, Report 87-3, p. 251-252, 1987.

1988-89

Graves, M.C., Geochemical characterization of the Meguma Group, at the Nova Scotia Department of Mines and Energy 12th Annual Review of Activities, Halifax, Nova Scotia, November 16-17, 1988.

Harris, J.R., Bonham-Carter, G.F. and Rencz, A.N., Computer integration of remotely sensed data as an aid to mineral exploration in eastern Nova Scotia, 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. A52, 1988.

Sangster, A.L., Graves, M.C. and Zentilli, M., Sulfur isotopic variation in Mn-As-Au-Zn-Pb bearing strata: Sedimentation and diagenesis in an anoxic basin in Cambro-Ordovician flysch of the Meguma Group, Nova Scotia, Canada, at the Nova Scotia Department of Mines and Energy 12th Annual Review of Activities, Halifax, Nova Scotia, November 16-17, 1988; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities, 1988, Part A, Report 88-3, p. 203, 1988.

d) Oral Presentations

1985-86

Bonham-Carter, G.F., Rencz, A.N., Broome, J., and Harris, J.R., Multiple data set integration in eastern Nova Scotia: Some preliminary results, at the Symposium on Computer Applications in Mineral Exploration 1986, Toronto, January 13-15, 1986; abstract published in CAME'86 Extended Abstracts, Program and Exhibition Guide, p. 71, 1986.

Graves, M.C. and Zentilli, M., Geochemical characteristics of rocks comprising the Goldenville-Halifax transition (GHT) of the Meguma Group, southern Nova Scotia, at the Atlantic Geoscience Society Colloquium, January 17-18, 1986; abstract published in Maritime Sediments and Atlantic Geology, v. 22, no. 2, p.186, 1986.

Mawer, C.F., Development of gold-quartz veins, Meguma Terrane, Nova Scotia, at the GAC/MAC Joint Annual Meeting, Fredericton, May 16, 1985; abstract published in GAC/MAC Program with Abstracts, v. 10, p. A38, 1985.

1986-87

Graves, M.C. and Zentilli, M., Geochemical characterization of the Goldenville-Halifax Transition of the Meguma Group of Nova Scotia: Metallogenic implications, at the Canadian Institute of Mining and Metallurgy District One Annual Meeting, Halifax, November 1986.

Harris, J.R., A comparison of lineaments interpreted from remotely sensed data and airborne magnetics and their relationship to gold deposits in central Nova Scotia, at the 5th Thematic Conference on Remote Sensing for Exploration Geology, Reno, Nevada, September 29-October 2, 1986.

Harris, J.R., Bonham-Carter, G.F., Rencz, A.N., and Sangster, A.L., Lineament analysis of Cobequid Highlands, Nova Scotia, using Seasat, Landsat and SPOT data, at the 11th Canadian Symposium on Remote Sensing, Waterloo, June 22-25, 1987.

Hy, C., Structural control of gold-bearing quartz vein emplacement during plutonism in the Meguma Group, Nova Scotia, at the Atlantic Geoscience Society 1987 Workshop and Symposium, Fredericton, February 6-7, 1987; abstract published in *Maritime Sediments and Atlantic Geology*, v. 23, No. 2, p. 99, 1987.

1987-88

Bonham-Carter, G.F., Rogers, P.J. and Ellwood, D.J., Image processing applied to regional geochemical data for mineral exploration, at the Third Decennial International Conference on Geophysical and Geochemical Exploration for Minerals and Groundwater, Toronto, September 27-October 1, 1987; abstract published in *Exploration '87 - Technical Program Abstracts*, p. 53, 1987.

Graves, M., Lithochemical evidences for the provenance of the Meguma Group, southern Nova Scotia, at the Atlantic Geoscience Society Colloquium '88, Antigonish, February 1988; abstract published in *Maritime Sediments and Atlantic Geology*, v. 24, no. 2, p. 196, 1988.

Hy, C., Meguma quartz veins in Tangier area, Nova Scotia: origin and emplacement, at the GAC/MAC Joint Annual Meeting, Saskatoon, May 27, 1987; abstract published in *GAC/MAC 1987, Program with Abstracts*, v. 12, p. 58, 1987.

1988-89

Sangster, A.L., Bretzlaff, R.A., Graves, M.C. and Zentilli, M., Stratigraphic variation of $\delta^{34}\text{S}$ compositions in the Meguma Group: Implications for paleoenvironment and mineralization, at the Atlantic Geoscience Society Colloquium on the Current Research in the Atlantic Provinces, Amherst, Nova Scotia, February 3-4, 1989.

Sangster, A.L., Graves, M.C. and Zentilli, M., Sulphur isotopic variation in Mn-As-Au-Zn-Pb-bearing strata : Sedimentation and diagenesis in an anoxic basin in Cambro-Ordovician flysch of the Meguma Group, Nova Scotia, Canada, at the GSA Annual Meeting, Denver, Colorado, November 3, 1988; abstract published in *GSA Abstracts with Programs*, v. 20, no. 7, p. A301, 1988; and in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 203, 1988.

Wright, D.F., Bonham-Carter, G.F. and Rogers, P.J., Spatial data integration of lake sediment geochemistry, geology and gold occurrences, Meguma terrane, eastern Nova Scotia, at the 8th International Symposium on Prospecting in Areas of Glaciated Terrain, CIM-IMM, Halifax, Nova Scotia, September 3, 1988.

1.2.1.2 Metallogeny of Cape Breton, Antigonish and Cobequid Highlands (A.L. Sangster)

a) Publications

1985-86

Sangster, A.L., Willemite and native silver occurrences, Kirkmount, Pictou County, Nova Scotia; *in* Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 151-158, 1986; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 231, 1986.

1986-87

Ervine, W.B., Deposits related to the Cobequid-Chedabucto fault system; *in* Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Information Series No. 12, p. 205, November, 1986.

Hill, J.R., A preliminary report on geology and on mineral occurrences in Precambrian carbonate rocks, Cape Breton Island, Nova Scotia; *in* Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 533-542, 1987.

Jamieson, R.A., Tallman, P., Marcotte, J.A., and Plint, H.E., Geology of the west-central Cape Breton Highlands, Nova Scotia; Geological Survey of Canada, Paper 87-13, 11p., 1987.

Justino, M.F. and Sangster, A.L., Geology in the vicinity of the Lime Hill zinc occurrence, southwestern Cape Breton Island, Nova Scotia; *in* Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 555-561, 1987.

Plint, H.E., Connors, K.A., and Jamieson, R.A., Geology and mineral occurrences of the Jumping Brook complex, Cheticamp-Pleasant Bay area, Cape Breton Island, Nova Scotia; *in* Current Research, Part B, Geological Survey of Canada, Paper 86-1B, p. 557-566, 1986.

Rogers, P.J., Bonham-Carter, G.F. and Ellwood, D.J., Anomaly enhancement by use of catchment basin analysis on surficial geochemical data from the Cobequid Highlands, Nova Scotia; *in* Proceedings of the International Symposium on Prospecting in Areas of Glaciated Terrain, Institution of Mining and Metallurgy, p. 163-174, 1986.

1987-88

Bonham-Carter, G.F., Rogers, P.J., and Ellwood, D.J., Catchment basin analysis applied to surficial geochemical data, Cobequid Highlands, Nova Scotia; *Journal of Geochemical Exploration*, v. 29, p. 259-278, 1987.

Hill, J.R., Geochemical differentiation of Precambrian metacarbonate assemblages, Cape Breton Island, Nova Scotia; *in* Current Research, Part B, Geological Survey of Canada, Paper 88-1B, p. 173-185, 1988.

Tallman, P., Sangster, A., and Jamieson, R.A., Geology and mineralization of the Jumping Brook metamorphic suite, Fairbault Brook area, western Cape Breton Island, Nova Scotia; *in* Current Research, Part B, Geological Survey of Canada, Paper 88-1B, p. 109-117, 1988.

1988-89

Rogers, P.J., Bonham-Carter, G.F. and Ellwood, D.J., Exploration target selection: An update on stream sediment geochemistry and catchment basin analysis from the Cobequid Highlands of Nova Scotia; *in* Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 147-152, 1988.

Sangster, A.L., Hydromorphic and glaciomechanical dispersion in a drumlin terrain, French Road, Cape Breton, Nova Scotia; *in* Proceedings of the 8th International Symposium on Prospecting in Areas of Glaciated Terrain, CIM-IMM, Halifax, Nova Scotia, p. 625-644, 1988.

1989-90

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b) Open Files

1987-88

Hill, J.R., Geology and geochemistry of Precambrian carbonate rocks, Cape Breton Island, Nova Scotia; Geological Survey of Canada, Open File 1597, 118 p., 18 figures in pocket, August 1987.

1988-89

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1989-90

Hill, J.R., Follow up geology and geochemistry of metacarbonate formations and their contained mineral occurrences, Cape Breton Island, Nova Scotia; Geological Survey of Canada, Open File 2077, 40p., 9 maps, 2 figures, 2 tables and 3 appendices, August 1989.

Jamieson, R.A., Tallman, P.C., Plint, H.E. and Connors, K.A., Geological setting of pre-Carboniferous mineral deposits in the western Cape Breton highlands, Nova Scotia; Geological Survey of Canada, Open File 2008, 72p., 12 figures and 4 tables, August 1989.

c) Posters

1985-86

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Plint, H.E., Connors, K.A. and Jamieson, R.A., Geology and mineralization of the western Highlands metavolcanic metasedimentary complex, Cheticamp - Pleasant Bay area, Cape Breton Island, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-28, 1985, and at the Atlantic Geoscience Society Colloquium, Amherst, January 17-18, 1986; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p.114; and in Maritime Sediments and Atlantic Geology, v. 22, no. 2, p.199, 1986.

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Sangster, A.L., Willemite-native silver mineralization, Kirkmount, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 22-23, 1986, and at the 55th Annual Meeting and Convention of the Prospectors and Developers Association convention, Toronto, Ontario, March 1986.

1986-87

Bonham-Carter, G.F., Ellwood, D.J., and Rogers, P.J., Catchment basin analysis of stream geochemical data in the Cobequid Highlands: a progress report, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 12, p. 187-188, 1986.

Bonham-Carter, G.F., Rogers, P.J. and Ellwood, D.J., Image processing applied to regional geochemical data for mineral exploration, at the Institution of Mining and Metallurgy 7th Symposium on Prospecting in Areas of Glaciated Terrain 1986, Kuopio, Finland, September 1-2, 1986.

Ellwood, D.J., Bonham-Carter, G.F. and Rogers, P.J., Integration and display of surficial geochemical data using catchment basins, Cobequid Highlands, Nova Scotia, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 1987.

Hill, J.R., Geology and geochemistry of Precambrian marbles in Cape Breton, Nova Scotia, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 1987.

Jamieson, R.A., Plint, H.E., Connors, K.A., Tallman, P. and Marcotte, J.A., Geology of the Jumping Brook metamorphic complex, west-central Cape Breton Highlands, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986; abstract published in Nova Scotia Department of Mines and Energy, Information Series, No. 12, p. 179-180, 1986.

Sangster, A.L., Zinc mineralization at Kirkmount: Nature of the occurrence and implications for mineral exploration, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986; extended abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 12, p. 190-193, 1986

Sangster, A.L. and Justino, M., Geology and zinc mineralization, Lime Hill, at the Nova Scotia Department of Mines and Energy Annual, 10th Annual Open House and Review of Activities, Halifax, November 1986; extended abstract published in Nova Scotia Department of Mines and Energy, Information Series 12, p. 196-198, 1986.

Tallman, P. and Jamieson, R.A., Regional geological setting of mineralization within the Jumping Brook metamorphic suite, western Cape Breton Highlands, at the Atlantic Geoscience Society 1987 Workshop and Symposium, Fredericton, February 6-7, 1987; abstract published in Maritime Sediments and Atlantic Geology, v. 23, no. 2, 108, 1987.

1987-88

Ervine, W., Mineral occurrences along the eastern end of the Cobequid-Chedabucto fault zone, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November, 1987.

Harris, J.R., Bonham-Carter, G.F., Rencz, A.N. and Sangster, A.L., Lineament analysis of Cobequid Highlands, using Seasat, Landsat and SPOT data, at the 11th Canadian Symposium on Remote Sensing, Waterloo, Ontario, June 1987.

Hill, J., Litho-geochemistry of Cape Breton carbonates, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

Raeside, R.P., Geology and metamorphism of the Lime Hill gneissic complex, Inverness County, Cape Breton Island, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities, Part A, Report 87-5, p. 221-223, 1987.

Rogers, P.J., Bonham-Carter, G.F. and Ellwood, D.J., Integrated mineral exploration using catchment basin analysis, Cobequid Highlands, Nova Scotia, at the 12th International Geochemical Exploration Symposium and the 4th Symposium on Methods of Geochemical Prospecting, Orleans, France, April 23-26, 1987; abstract published in Programme and Abstracts, p. 35-36, 1987.

Sangster, A.L. and Justino, M., Aspects of the geology and geochemistry of the Lime Hill zinc occurrence, Nova Scotia, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 1987; and at the Atlantic Geoscience Society 1987 Workshop and Symposium, Fredericton, February 1987.

Sangster, A.L. and Thorpe, R.I., Lead isotope composition of galenas from metacarbonate-hosted zinc occurrences, Cape Breton, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987; extended abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 225-228, 1987.

Tallman, P., Jamieson, R.A. and Sangster, A.L., Lithological cross-sections and mineralization of the Fairbault Brook area, Jumping Brook metamorphic suite, western Cape Breton Highlands, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987; extended abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 221-224, 1987.

1988-89

Hill, J.R., Geochemistry of Cape Breton Marble, at the Nova Scotia Department of Mines and Energy, 12th Annual Open House and Review of Activities, Halifax, Nova Scotia, November 16-17, 1988.

Sangster, A.L., Complex hydromorphic and glacio-mechanical geochemical dispersion, French Road area, Cape Breton, Nova Scotia: A Case History, at the Nova Scotia Department of Mines and Energy, 12th Annual Open House and Review of Activities, Halifax, Nova Scotia, November 16-17, 1988; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 209-210, 1988.

Sangster, A.L., Hydromorphic and glaciomechanical dispersion in a drumlin terrain, French Road, Cape Breton, Nova Scotia, at the 8th International Symposium on Prospecting in Areas of Glaciated Terrain, Halifax, Nova Scotia, September 3, 1988.

Sangster, A.L. and Thorpe, R.I., Sulphur and lead isotope studies on two Grenville-type, marble-hosted zinc occurrences, Cape Breton, Nova Scotia, at the Nova Scotia Department of Mines and Energy 12th Annual Open House and Review of Activities, Halifax, Nova Scotia, November 16-17, 1988; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 207, 1988.

d) Oral Presentations

1986-87

Bonham-Carter, G.F., Anomaly enhancement using catchment basin analysis on surficial geochemical data from Cobequid Highlands, Nova Scotia, at the Institution of Mining and Metallurgy 7th Symposium on Prospecting in Areas of Glaciated Terrain September 1-2, 1986, Finland, 1986.

Jamieson, R.A. and Plint, H.A., Geology and tectonic significance of the Jumping Brook metamorphic suite, western Cape Breton Highlands, Nova Scotia, at the 22nd annual meeting of the Geological Society of America - Northeastern Section, Pittsburgh, March 5, 1987; abstract published in GSA-Northeastern Section Abstracts with Programs 1987, p. 21, 1987.

Plint, H., Syntectonic prograde metamorphism of the Jumping Brook metamorphic suite, western Cape Breton Island, Nova Scotia, at the 22nd annual meeting of the Geological Society of America - Northeastern Section, Pittsburgh, March 5, 1987; abstract published in GSA-Northeastern Section Abstracts with Programs 1987, p. 21, 1987.

Rogers, P.J., Bonham-Carter, G.F. and Ellwood, D.J., Integrated mineral exploration using catchment basin analysis, Cobequid Highlands, Nova Scotia, at the International Geochemical Exploration Symposium, Orleans, France, April 1986.

1987-88

Harris, J.R., Bonham-Carter, G.F., Rencz, A.N., and Sangster, A.L., Lineament analysis of Cobequid Highlands, Nova Scotia, using Seasat, Landsat and SPOT data, at the 11th Canadian Symposium on Remote Sensing, Waterloo, Ontario, June 1987.

Plint, H.E., Jamieson, R.A., and Issler, D.R., Metamorphism and tectonics of the western Cape Breton Highlands, Nova Scotia: constraints from microstructure, P-T-t models, and geochronology, at the GAC/MAC Joint Annual Meeting, Saskatoon, May 26, 1987; abstract published in GAC/MAC 1987 Program with Abstracts, v. 12, p. 81, 1987.

Reynolds, P.H., Jamieson, R.A., Barr, S.M., Raeside, R.P. and Plint, H.E., $^{40}\text{Ar}/^{39}\text{Ar}$ geochronology of the Cape Breton Highlands, Nova Scotia, at the GAC/MAC Joint Annual Meeting, Saskatoon, May 26, 1987; abstract published in GAC/MAC 1987 Program with Abstracts, v. 12, p. 84, 1987.

Sangster, A.L., Paleosupergene willemite mineralization, Kirkmount, southern Antigonish Highlands, Nova Scotia, at the Geological Society of America, 1987 Annual Meeting and Exposition, Phoenix, Arizona, Oct. 28, 1987; abstract published in Abstracts with Programs, v. 19, p. 828, 1987.

Sangster, A.L. and Thorpe, R.I., Sulphur and lead isotope studies on two Grenville-type, marble-hosted zinc occurrences, Cape Breton, Nova Scotia, at the Geological Society of America, 23 Annual Meeting, Northeastern Section, Portland, Maine, March 11, 1988; abstract published in GSA-Northeastern Section Abstracts with Programs 1988, v. 20, no. 1, p. 67, 1988.

Tallman, P., Jamieson, R.A. and Plint, H.E., Timing of sulphide mineralization, Fairbault Brook area, western Cape Breton Highlands, at the Atlantic Geoscience Society Colloquium '88, Antigonish, February 1988; abstract published in Maritime Sediments and Atlantic Geology, v. 24, no. 2, p. 215, 1988.

1988-89

Jamieson, R.A., Metamorphic P-T-t data from western Newfoundland and Cape Breton - implications for Taconian and Acadian tectonics, 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. A60, 1988.

1.2.1.3 Metallogeny of Carboniferous terranes (A.L. Sangster)

a) Publications

1984-85

Vaillancourt, P.D., Sandstone lithology in the Silver Mine Formation and its relation to galena occurrence in the Yava deposit, Cape Breton Island, Nova Scotia; in Current Research, Part A, Geological Survey of Canada, Paper 85-1A, p. 743-751, 1985.

1985-86

Vaillancourt, P.D., and Sangster, D.F., Isotope and hydrocarbon studies of the Yava sandstone-lead deposit, Cape Breton Island, Nova Scotia: a progress report; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 133-140, 1986; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 232, 1986.

1986-87

Ravenhurst, C.E., Reynolds, P.H., and Zentilli, M., Strontium isotopic studies of rock and mineral samples in the Shubenacadie basin, Nova Scotia; in Current Research, Part B, Geological Survey of Canada, Paper 86-1B, p. 547-555, 1986.

1987-88

Ravenhurst, C.E., Reynolds, P.H., Zentilli, M., and Akande, S.O., Isotopic constraints on the genesis of Zn-Pb mineralization at Gays River, Nova Scotia, Canada; Economic Geology, v. 82, pp. 1294-1308.

1989-90

Héroux, Y., Michoux, D., Desjardins, M. and Sangster, D.F., Pétrographie et géochimie des matières organiques des séquences plombo-zincifères d'âge Carbonifère, Bassin Salmon River, Nouvelle-Ecosse, Canada; Organic Geochemistry, v. 14, no. 3, p. 253-268, 1989.

b) Open Files

1988-89

Hein, F.J., Graves, M.C. and Ruffman, A., The geology of the Jubilee zinc-lead deposit, Victoria County, Cape Breton Island, Nova Scotia; Geological Survey of Canada, Open File 1891, 130 p., 11 maps, September 1988.

c) Posters

1985-86

Birk, D., Pilgrim, J. and Zodrow, E., Trace element contents of coals and associated rocks of the Sydney Basin, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985.

Ravenhurst, C.E. and Zentilli, M., Strontium isotopic studies of minerals in the Shubenacadie Basin, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p. 113, 1985.

Ravenhurst, C.E., Akande, S.O., Reynolds, P.H. and Zentilli, M., Carbonate-hosted Pb-Zn-Ba-F deposits, and their genetic relationship to Carboniferous Basins in Nova Scotia, at the GAC/MAC Joint Annual Meeting, Fredericton, May 17, 1985; abstract published in GAC/MAC Program with Abstracts v. 10, p. 51, 1985.

1988-89

Hein, F.J., Graves, M.C. and Ruffman, A., Geology of the Jubilee zinc-lead deposit, Victoria County, Cape Breton Island, Nova Scotia, at the Nova Scotia Department of Mines and Energy 12th Annual Review of Activities, Halifax, Nova Scotia, November 16-17, 1988; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 193-194, 1988.

d) Oral Presentations

1984-85

Vaillancourt, P.D., Sandstone lithology in the Silver Mine Formation and its relation to galena occurrence in the Yava deposit, Cape Breton Island, Nova Scotia, at the 1985 Atlantic Geoscience Society Symposium, Wolfville, January 18-19, 1985; abstract published in Maritime Sediments and Atlantic Geology, v. 21, nos. 1, 2, 3, p. 42, 1985.

1985-86

Kirkham, R.V. and Boehner, R.C., Base metal occurrences in Carboniferous rocks, Sydney area, Nova Scotia, at the GAC/MAC Joint Annual Meeting, Fredericton, May 17, 1985; abstract published in GAC/MAC Program with Abstracts, v. 10, p. A31, 1985; and in the Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 212, 1986.

Ravenhurst, C., Reynolds, P., Zentilli, M., and Akande, S., Isotopic constraints on the genesis of the Gays River Pb-Zn deposit, at the Annual Meeting of the Atlantic Geoscience Society Colloquium, January 17-18, 1986; abstract published in Maritime Sediments and Atlantic Geology, v. 22, no. 2, p.202, 1986.

Vaillancourt, P.D. and Sangster, D.F., Isotope and hydrocarbon studies of the Yava sandstone-lead deposit, Cape Breton Island, Nova Scotia: A progress report, at the GAC/MAC Joint Annual Meeting, Fredericton, May 17, 1985; abstract published in GAC/MAC Program with Abstracts, v. 10, p. A64, 1985.

1986-87

Ravenhurst, C.E., Reynolds, P.H. and Zentilli, M., A model for the evolution of hot (>200°C) overpressured brines under an evaporite seal: The Fundy/Magdalen Carboniferous Basin of Atlantic Canada and its associated Pb-Zn-Ba deposits, at the Atlantic Geoscience Society 1987 Workshop and Symposium, Fredericton, February 6-7, 1987; abstract published in *Maritime Sediments and Atlantic Geology*, v. 23, no. 2, p. 105, 1987.

1987-88

Héroux, Y., Michoux, D., Desjardins, M., and Sangster, D.F., Petrography and geochemistry of organic matter from lead-zinc bearing Carboniferous sequences of the Salmon River Basin, Nova Scotia, Canada, at the Society for Organic Petrology, 4th Annual Meeting, San Francisco, California, September 1987.

Reynolds, P.H., Jamieson, R.A., Barr, S.M., Raeside, R.P., and Plint, H.E., ⁴⁰Ar/³⁹Ar Geochronology of the Cape Breton Highlands, Nova Scotia, at the GAC/MAC Joint Annual Meeting, Saskatoon, May 26, 1987; abstract published in *GAC/MAC '87 Program with Abstracts*, v. 12, p. 84, 1987.

1988-89

Graves, M.C., Ruffman, A. and Hein, F.J., Economic geology and development of the Jubilee Pb-Zn deposit, Cape Breton Island, Nova Scotia, at the Atlantic Geoscience Society Colloquium on Current Research in the Atlantic Provinces, Amherst, Nova Scotia, February 3-4, 1989.

Héroux, Y., Henry, A.L., Tassé, N., Sangster, D.F. and Anderson, G.M., La matière organique comme guide de l'altération hydrothermale associée aux minéralisations, Pb-Zn-Ba-Cu et Sb, at the 91st Annual General Meeting of the Canadian Institute of Mining and Metallurgy, Québec City, May 1, 1989; abstract published in *CIM Bulletin*, v. 82, no. 923, p. 69, March 1989.

1.2.1.4 Mineral data bank (D.F. Garson)

No output.

1.2.1.5 Analytical support (A.G. Plant)

Analytical data/results were provided directly to project geologists.

1.2.2 REGIONAL GEOLOGICAL STUDIES

1.2.2.1 Geology of Meguma Group and associated gold deposits (F.W. Chandler)

a) Publications

1984-85

O'Brien, B.H., Preliminary report on the geology of the La Have River area, Nova Scotia; *in* Current Research, Part A, Geological Survey of Canada, Paper 85-1A, p. 789-794, 1985.

1985-86

O'Brien, B.H., Preliminary report on the geology of the Mahone Bay area, Nova Scotia; *in* Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 439-444, 1986; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 229, 1986.

b) Open Files

1985-86

O'Brien, B.H., Geological map of the La Have area, Nova Scotia; Geological Survey of Canada, Open File 1156, 1:25,000 scale map, 1985.

1986-87

O'Brien, B., Geology, Mahone Bay area, Nova Scotia (21A/8,9); Geological Survey of Canada, Open File No. 1373, 4 maps, scale 1:25,000, February 1987.

1988-89

O'Brien, B.H., A study of the Meguma terrane in Lunenburg County, Nova Scotia; Geological Survey of Canada, Open File 1823, 130 p., July 1988.

c) Posters

1985-86

O'Brien, B.H., Preliminary report on the geology of the Mahone Bay area, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985, and at the Atlantic Geoscience Society Colloquium, Amherst, January 17-18, 1986; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p.131, 1985.

d) Oral Presentations

1985-86

O'Brien, B.H., Syntectonic veining and hydraulic fracturing: Some examples from the Meguma Group of Nova Scotia, at the GAC/MAC Joint Annual Meeting, Fredericton, May 16, 1985; abstract published in GAC/MAC Program with Abstracts, v. 10, p. A45, 1985.

1.2.2.2 Geology of southwest part of Antigonish Highlands (F.W. Chandler)

a) Publications

1984-85

Murphy, J.B., Geology of the southwestern Antigonish Highlands, Nova Scotia; in *Current Research, Part B, Geological Survey of Canada, Paper 85-1B*, p. 519-530, 1985; abstract published in Nova Scotia Department of Mines and Energy, *Report of Activities 1985, Report 86-1*, p. 233, 1986.

1985-86

Murphy, J.B., Geology of the western Antigonish Highlands, Nova Scotia; in *Current Research, Part A, Geological Survey of Canada, Paper 86-1A*, p. 445-453, 1986; abstract published in Nova Scotia Department of Mines and Energy, *Report of Activities 1985, Report 86-1*, p. 235, 1986.

1987-88

Murphy, J.B., Petrology of upper Ordovician - lower Silurian rocks of the Antigonish Highlands, Nova Scotia; *Canadian Journal of Earth Sciences*, v. 24, no. 4, p. 752-759, 1987.

Murphy, J.B., The stratigraphy and depositional environment of Upper Ordovician to Lower Devonian rocks in the Antigonish Highlands, Nova Scotia, *Maritime Sediments and Atlantic Geology*, v. 23, no. 1, p. 63-75, 1987.

Murphy, J.B., and Keppie, J.D., The stratigraphy and depositional environment of the Late Precambrian Georgeville Group, Antigonish Highlands, Nova Scotia; *Maritime Sediments and Atlantic Geology*, v. 23, no. 1, p. 49-61, 1987.

Murphy, J.B. and Keppie, J.D., Late Precambrian Antigonish Terrane (a periarctic basin) unconformably overlain by Paleozoic overstep rocks typical of the Avalon Composite Terrane, near Antigonish, Nova Scotia; in *Geological Society of America Centennial Field Guide - Northeastern Section*, p. 421-426, 1987.

1988-89

Keppie, J.B. and Murphy, J.B., Anatomy of a telescoped pull-apart basin: The stratigraphy and structure of Cambrian-lower Ordovician rocks of the Antigonish Highlands, Nova Scotia; *Maritime Sediments and Atlantic Geology*, v. 24, no. 2, p. 123-138, 1988.

Murphy, J.B., Late Precambrian to Late Devonian mafic magmatism in the Antigonish Highlands of Nova Scotia : Multistage melting of a hydrated mantle; *Canadian Journal of Earth Sciences*, v.25, no. 4, p. 473-485, 1988.

1989-90

Murphy, J.B., Keppie, J.D. and Hynes, A.J., *Geology of the Antigonish Highlands*; Geological Survey of Canada, Paper 89-10, 1989 (in press).

b) Open Files

1985-86

Murphy, J.B., *Geological maps of the central and southern Antigonish Highlands, Nova Scotia*; Geological Survey of Canada, Open File 1181, two maps at 1:50,000 scale, 1985.

c) Posters

1985-86

Murphy, J.B., *The geology of the southern Antigonish Highlands, Nova Scotia*, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p. 117-118, 1985.

Murphy, J.B. and Keppie, J.D., *Late Precambrian development of an interarc basin in the Antigonish Highlands, Nova Scotia*, at the GAC/MAC Joint Annual Meeting, Fredericton, May 15, 1985; abstract published in GAC/MAC Program with Abstracts, v. 10, p. A42, 1985.

1986-87

Murphy, J.B., *Geology of the central and southern Antigonish Highlands*, at the Nova Scotia Department of Mines and Energy, 10th Annual Review of Activities, Halifax, November 19-20, 1986; abstract published in Nova Scotia Department of Mines and Energy, Information Series, No. 12, p. 176, 1986.

1989-90

Murphy, J.B. and Hynes, A.J., *Tectonic control on the origin and orientation of igneous banding: An example from the late Proterozoic Greendale complex, Nova Scotia*, at the GAC/MAC Annual Meeting, Montreal, Québec, May 15, 1989; abstract published in GAC/MAC Program with Abstract, v. 14, p. A35, 1989.

d) Oral Presentations

1984-85

Murphy, J.B. and Keppie, J.D., *Geology of the Georgeville Group: Late Precambrian development of an interarc basin in the Antigonish Highlands*, at the 1985 Atlantic Geoscience Society Symposium, Wolfville, January 18-19, 1985; abstract published in *Maritime Sediments and Atlantic Geology*, v. 21, nos. 1, 2, 3, p. 40, 1985.

1985-86

Murphy, J.B. and Hynes, A.J., Secondary mobility on high field strength elements in metabasalts, at the GAC/MAC Joint Annual Meeting, Fredericton, May 17, 1985; abstract published in GAC/MAC Program with Abstracts, v. 10, p. A42, 1985.

Murphy, J.B. and Keppie, J.D., Geological history of the Antigonish Highlands, Nova Scotia, at the Atlantic Geoscience Society Colloquium, Amherst, January 17-18, 1986; abstract published in Maritimes Sediments and Atlantic Geology, v. 22, no. 2, p. 194, 1986.

1986-87

Murphy, J.B., The stratigraphy and depositional environment of Upper Ordovician to Lower Devonian rocks in the Antigonish Highlands, Nova Scotia, at the Atlantic Geoscience Society 1987 Workshop and Symposium, Fredericton, February 6-7, 1987; abstract published in Maritime Sediments and Atlantic Geology, v. 23, no. 2, p. 63, 1987.

1.2.2.3 Geology of Meguma Group and plutons, Shelburne area (F.W. Chandler)

a) Publications

1984-85

Rogers, H.D., Geology of the igneous-metamorphic complex of Shelburne and eastern Yarmouth counties, Nova Scotia; *in* Current Research, Part A, Geological Survey of Canada, Paper 85-1A, p. 773-777, 1985.

1988-89

Rogers, H.D. and Barr, S.M., Petrology of the Shelburne and Barrington Passage Plutons, southern Nova Scotia; *Maritime Sediments and Atlantic Geology*, v. 24, no. 1, p. 21-31, 1988.

b) Open Files

1986-87

Rogers, H.D., Geology, Shelburne-Cape Sable Island area, Nova Scotia (20O/8; 20P/5,6,11-14; 21A/3); Geological Survey of Canada, Open File No. 1374, 3 maps, scale 1:50,000, February 1987.

1988-89

Rogers, H.D., Field relations, petrography and geochemistry of granitoid plutons in the Shelburne area, southern Nova Scotia; Geological Survey of Canada, Open File 1835, 137p., July 1988.

1.2.2.4 Geology of Sporting Mountain granitoid complex (F.W. Chandler)

a) Publications

1984-85

Sexton, A.J. and Cotie, A.A., Petrogenesis and economic geology of the Sporting Mountain pluton, Cape Breton Island, Nova Scotia; *in* Current Research, Part A, Geological Survey of Canada, Paper 85-1A, p. 779-782, 1985.

b) Open Files

1985-86

Sexton, A.J., Geology of the Sporting Mountain area, southeastern Cape Breton Island, Nova Scotia; Geological Survey of Canada, Open File 1236, 136p. report and one 1:25,000 scale map, February 1986.

1.2.2.5 Stratigraphy and sedimentology, Tetamagouche syncline (F.W. Chandler)

a) Publications

1984-85

Ryan, R.J., Upper Carboniferous strata of the Tetamagouche Syncline, Cumberland Basin, Nova Scotia; *in* Current Research, Part B, Geological Survey of Canada, Paper 85-1B, P. 481-490, 1985; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 234, 1986.

b) Open Files

1985-86

Ryan, R.J., Geology of the Tatamagouche Syncline (NTS 11E/11,12), Cumberland Basin, Nova Scotia; Geological Survey of Canada, Open File 1257, report and map at 1:50,000 scale, 1986.

1.2.2.6 Stellarton Basin analysis (F.W. Chandler)

a) Publications

1984-85

Yeo, G.M., Upper Carboniferous sedimentation in northern Nova Scotia and the origin of Stellarton Basin; *in* Current Research, Part B, Geological Survey of Canada, Paper 85-1B, p. 511-518, 1985; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 227, 1986.

1985-86

Yeo, G.M. and Ruixiang, Gao, Late Carboniferous dextral movement on the Cobequid-Hollow fault system, Nova Scotia: evidence and implications; *in* Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 399-410, 1986; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 238, 1986.

1986-87

Yeo, G., Daigle, L., D'Orsay, M., Ruixiang, G., Palmer, S., and Snow, R., Stellarton Basin Project: 1986 progress report; *in* Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Information Series No. 12, p. 184-186, November 1986.

1987-88

Naylor, R.D., Smith, W.D., and Yeo, G.M., A summary of recent research in the Pictou Coalfield, Nova Scotia; *in* Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 27-31, 1987.

Yeo, G.M., Kalkreuth, W.D., Tomica, M., Dolby, G., and White, J.C., Investigations of coal from the Pictou coal fields, Nova Scotia; *in* Nova Scotia Department of Mines and Energy, Report of Activities, Part A, Report 87-5, p. 239-243, 1987.

Yeo, G.M., Kalkreuth, W.D., Dolby, G., and White, J.C., Preliminary report on petrographic, palynological and geochemical studies of coals from the Pictou coalfield, Nova Scotia; *in* Current Research, Part B, Geological Survey of Canada, Paper 88-1B, p. 29-40, 1988.

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1988-89

Daigle, L.C., Deposition of the lower three members of the Stellarton Formation; *in* Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 199-202, 1988.

1989-90

Naylor, R.D., Kalkreuth, W., Smith, W.D. and Yeo, G.M., Stratigraphy, sedimentology, and depositional environments of the coal-bearing Stellarton formation, Nova Scotia; *in* Contributions to Canadian Coal Geoscience, Geological Survey of Canada, Paper 89-8, p. 2-13, 1989.

Yeo, G.M., Petrology and depositional environment of the Foord seam, Pictou Coalfield, Nova Scotia; *Atlantic Geology*, v. 25, no. 1, p. 105-112, 1989.

b) Open Files

1987-88

Yeo, G.M., Geology of the Glasgow-Toney River area, Nova Scotia; Geological Survey of Canada, Open File 1656, 1 map, scale 1:50,000, November 1987.

c) Posters

1985-86

Yeo, G.M., Evidence for Late Carboniferous dextral movement on the Cobequid - Hollow fault system and other findings: A progress report on the Stellarton Basin Project, at the GAC/MAC Joint Annual Meeting, Fredericton, May 15, 1985, and at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p. 123-125, 1985; and in GAC/MAC Program with Abstracts v. 10, p. A70, 1985.

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1986-87

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D'Orsay, A., Naylor, R., Smith, W., Black, M. and Palmer, S., Models for coal exploration-Trenton syncline area, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986.

1987-88

Naylor, R., Smith, W. and Yeo, G.M., Geology of the Pictou coalfield, at the Nova Scotia Department of Mines and Energy 11th Annual Open House and Review of Activities, Halifax, November 1987.

Snow, R.J., Depositional environments of the Upper Thorburn Member of the Stellarton Formation, Pictou coalfield, Nova Scotia, at the Atlantic Geoscience Society Colloquium'88, Antigonish, February 1988.

Ruixiang, G., White, J.C. and Yeo, G.M., Late Carboniferous pull-apart tectonics and sedimentation in the Stellarton Graben, Nova Scotia, Canada, at the 11th International Carboniferous Congress, Beijing, China, September 1987.

1988-89

Ruixiang, G. and Yeo, G.M., Stellarton graben and the Hercynian orogeny in the 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. A43, 1988.

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d) Oral Presentations

1984-85

Yeo, G.M., Origin of the Stellarton Subbasin, at the 1985 Atlantic Geoscience Society Symposium, Wolfville, January 18-19, 1985; abstract published in Maritime Sediments and Atlantic Geology, v. 21, nos. 1, 2, 3, p. 35, 1985.

1985-86

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1986-87

Ruixiang, G., White, J., and Yeo, G., Late Carboniferous deformation on the eastern Cobequid-Hollow Fault zone, Nova Scotia, at the GAC/MAC/CGU Joint Annual Meeting, Ottawa, May 21, 1986; abstract published in GAC/MAC/CGU Program with Abstracts, v. 11, p. 71, 1986.

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1987-88

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Yeo, G.M., Geology of the Pictou Coalfield, Nova Scotia, at Laurentian University, Sudbury, March 1988.

Yeo, G.M., The Pictou Coalfield, Nova Scotia, at Acadia University, Wolfville, Nova Scotia, March 1988.

1988-89

Naylor, R.D., Smith, W.D., Snow, R. and Yeo, G.M., Pictou coalfield: A classic stike-slip lacustrine basin, at the GAC/MAC/CSPG Joint Annual Meeting, St. John's, May 25, 1988; abstract published in *GAC/MAC/CSPG Program with Abstracts*, v. 13, p. A90, 1988.

Yeo, G.M., Kalkreuth, W., Naylor, R.D. and Smith, W.D., Organic petrology and depositional environments of coals and oil shales from the Pictou coalfield, Nova Scotia, at the GAC/MAC/CSPG Joint Annual Meeting, St. John's, May 25, 1988; abstract published in *GAC/MAC/CSPG Program with Abstracts*, v. 13, p. A137-138, 1988.

1.2.2.7 Metamorphic and igneous geology, Port Mouton Area (F.W. Chandler)

a) Publications

1985-86

Hope, T.L. and Woodend, S.L., Geological mapping and igneous and metamorphic petrology, Queen's and Shelburne counties, Nova Scotia; in *Current Research, Part A, Geological Survey of Canada, Paper 86-1A*, p. 429-433, 1986; abstract published in *Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1*, p. 236, 1986.

b) Open Files

1986-87

Hope, T. and Woodend, S., Geology, Port Mouton-Lockport area, Nova Scotia (20P/10,11,14,15); Geological Survey of Canada, Open File 1372, one 1:50,000 scale map, February 1987.

1988-89

Hope, T.L., Douma, S.L. and Raeside, R.P., Geology of the Port Mouton-Lockport area, southwestern Nova Scotia; Geological Survey of Canada, Open File 1768, 80 p., 1 map, June 1988.

c) Posters

1985-86

Hope, T.L. and Woodend, S.L., Geological mapping and igneous and metamorphic petrology, Queens and Shelburne Counties, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p. 110, 1985.

1.2.2.8 Granites of eastern Meguma Terrane (F.W.Chandler)

a) Publications

1985-86

Hill, J.D., Granitoid plutons in the Canso area, Nova Scotia; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 185-192, 1986; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p.228, 1986.

1986-87

Hill, J.D., Geology of the Guysborough-Country Harbour area, Nova Scotia; in Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 415-422, 1987.

1987-88

Hill, J.D., Sequence of structural, metamorphic and intrusive events in the Canso and Forest Hill Map Areas, Eastern Meguma Terrane; in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 201-205, 1987.

Hill, J. and Raeside, R.P., Discussion of "Structural study of highly deformed Meguma phyllite and granite, vicinity of White Head village, SE Nova Scotia by C.K. Mawer and P.E. Williams"; in Maritime Sediments and Atlantic Geology, v. 23, p. 151-154, 1987.

1988-89

Hill, J.D., Late Devonian peraluminous granitic plutons in the Canso area, Eastern Meguma Terrane, Nova Scotia; in *Maritime Sediments and Atlantic Geology*, v. 24, no. 1, p. 11-19, 1988.

Raeside, R.P., Hill, J.D. and Eddy, B.G., Metamorphism of Meguma Group metasedimentary rocks, Whitehead Harbour area, Guysborough County, Nova Scotia; in *Maritime Sediments and Atlantic Geology*, v. 24, no. 1, p. 1-9, 1988.

b) Open Files

1986-87

Hill, J.D., Geological map of Cape Canso, Nova Scotia (11F/2,3,6,7); Geological Survey of Canada, Open File 1276, 1:25,000 scale map, May 1986.

1987-88

Hill, J.D., Geology of the Forest Hill area, Eastern Meguma Terrane, Nova Scotia, (parts of 11F/4,5); Geological Survey of Canada, Open File 1567, 1:50,000 scale map, July 29, 1987.

c) Posters

1985-86

Hill, J.D., Granite plutons in the eastern Meguma terrain, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p. 127-130, 1985.

1986-87

Hill, J.D., Geology of the Guysborough-Country Harbour area, at the Nova Scotia Department of Mines and Energy, 10th Annual Review of Activities, Halifax, November 19-20, 1986; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 12, p. 182-183, 1986.

Slaney, R. and Hill, J.D., Computer-enhanced radiometric maps of the eastern Meguma terrane, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 1987.

1987-88

Hill, J.D., Plutonic-tectonic events, Canso area, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

d) Oral Presentations

1986-87

Hill, J.D., Structural and magmatic history of the eastern Meguma Terrane, at the Geological Survey of Canada Lithosphere and Canadian Shield Division, 'Precambrian High', December 1986.

1987-88

Hill, J.D., Time constraints on the emplacement and petrogenesis of Acadian peraluminous granitoid plutons in the eastern Meguma terrane, Nova Scotia, at the GAC/MAC Joint Annual Meeting, Saskatoon, May 25, 1987; abstract published in GAC/MAC'87 Program with Abstracts, v. 12, p. 56, 1987.

1.2.2.9 Geological mapping, northern Cape Breton Highlands (F.W. Chandler)

a) Publications

1985-86

Raeside, R.P., Barr, S.M., White, C.E., and Dennis, F.A.R., Geology of the northernmost Cape Breton Highlands, Nova Scotia; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 291-296, 1986; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 239, 1986.

1986-87

Barr, S.M., Raeside, R.P., White, C.E., and Yaowanoyothin, W., Geology of the northeastern and central Cape Breton Highlands, Nova Scotia; in Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 199-207, 1986.

Barr, S.M., Raeside, R.P., White, C.E., and Yaowanoyothin, W., Geological mapping in the Cape Breton Highlands National Park; in Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Information Series, No. 12, p. 177-178, November 1986.

Barr, S.M. and Raeside, R.P., Pre-Carboniferous tectonostratigraphic subdivisions of Cape Breton Island, Nova Scotia; in Maritime Sediments and Atlantic Geology, v. 22, No. 3, p. 252-263, 1986.

O'Beirne-Ryan, A.M., Barr, S.M., and Jamieson, R.A., Contrasting petrology and age of two megacrystic granitoid plutons, Cape Breton Island, Nova Scotia; in Current Research, Part B, Geological Survey of Canada, Paper 86-1B, p. 179-190, 1986.

O'Beirne-Ryan, A.M. and Jamieson, R.A., Geology of the West Branch North River and the Bothan Brook plutons of the south-central Cape Breton Highlands, Nova Scotia; in Current Research, Part B, Geological Survey of Canada, Paper 86-1B, p. 191-200, 1986.

Raeside, R.P. and Barr, S.M., Stratigraphy and structure of the southeastern Cape Breton Highlands, Nova Scotia; in Maritime Sediments and Atlantic Geology, v. 22, no. 3, p. 264-276, 1986.

1987-88

Barr, S.M., and Raeside, R.P., Grenvillian basement in the northern Cape Breton Highlands, Nova Scotia; *Canadian Journal of Earth Sciences*, v. 24, no. 5, p. 992-997, 1987.

1989-90

Barr, S.M. and Raeside, R.P., Tectonostratigraphic divisions of Cape Breton Island, Nova Scotia: Implications for the configurations of terranes in northern Appalachain orogen; *Geology*, (in press).

Dunning, G.R., Barr, S.M., Raeside, R.P. and Jamieson, R.A., U-Pb zircon, titanite, and monazite ages in the Bras d'Or and Aspy terranes of Cape Breton Island, Nova Scotia: Implications for magmatic and metamorphic history; *Geological Society of America Bulletin*, (in press).

Loncarevic, B.D., Barr, S.M., Raeside, R.P., Keen, C.E. and Marillier, F., Northeastern extension of crustal expression of terranes from Cape Breton Island, Nova Scotia, using geophysical data; *Canadian Journal of Earth Sciences*, (in press).

Raeside, R.P. and Barr, S.M., Geology of northern Cape Breton Island, Nova Scotia; Geological Survey of Canada, Coloured map 1752A, 1:100,000 scale, (in press).

Raeside, R.P. and Barr, S.M., Preliminary report on the geology of the northern and eastern Cape Breton Highlands, Nova Scotia; Geological Survey of Canada, Paper 89-14, (in press).

Reynolds, P.H., Jamieson, R.A., Barr, S.M. and Raeside, R.P., Ar^{40}/Ar^{39} Age dating study in the Cape Breton Highlands, Nova Scotia: Thermal histories and tectonic implications; *Canadian Journal of Earth Sciences*, (in press).

b) Open Files

1987-88

Barr, S.M., Raeside, R.P., and Jamieson, R.A., Geology of the igneous and metamorphic rocks of Northern Cape Breton Island, Nova Scotia; Geological Survey of Canada, Open File 1594, October 1987.

c) Posters

1985-86

Raeside, R.P., Barr, S.M., White, C.E. and Dennis, F.A.R., Geological mapping of North Mountain, Northern Cape Breton Highland, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985, and at the Atlantic Geoscience Society Colloquium, Amherst, January 17-18, 1986; abstract published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p. 107-108, 1985; and in *Maritime Sediments and Atlantic Geology*, v. 22, no. 2, p. 201, 1986.

1986-87

Barr, S.M., Raeside, R.P., White, C.E. and Yaowanoyothin, W., Cape Breton Highlands project, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986.

1987-88

Barr, S.M., Macdonald, A.S. and White, C.E., Volcanic and granitoid rocks, S.E. Cape Breton, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

Barr, S.M., Raeside, R.P. and Jamieson, R.A., Geological map of the igneous and metamorphic rocks of northern Cape Breton Island, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987; extended abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 189-191, 1987.

Barr, S.M., Raeside, R.P. and Jamieson, R.A., Geological mapping of northern Cape Breton Island, Nova Scotia, at the Geological Survey of Canada, Current Activities Forum, Ottawa, January 1988; and at the 1988 Atlantic Geoscience Society Colloquium, Antigonish, Nova Scotia, February 1988; abstract published in Maritime Sediments and Atlantic Geology, v. 24, no.2, p.186, 1988.

Barr, S.M., White, C.E. and Macdonald, A.S., Metavolcanic and granitoid rocks of southeastern Cape Breton Island and southern New Brunswick: a comparison, at the 1988 Atlantic Geoscience Society Colloquium, Antigonish, Nova Scotia, February 1988; abstract published in Maritime Sediments and Atlantic Geology, v. 24, no.2, p. 186, 1988.

d) Oral Presentations

1985-86

Barr, S.M., Granitoid rocks of the Cape Breton Highlands, Nova Scotia, at the GAC/MAC Joint Annual Meeting, Fredericton, May 15, 1985; abstract published in GAC/MAC Program with Abstracts, v. 10, p. A3, 1985.

Barr, S.M. and Raeside, R.P., Tectonostratigraphic subdivisions of Cape Breton Island, Nova Scotia, at the Atlantic Geoscience Society Colloquium, Amherst, January 17-18, 1986; abstract published in Maritime Sediments and Atlantic Geology, v. 22, No. 2, p. 176, 1986.

Raeside, R.P. and Barr, S.M., Tectonism of the eastern Cape Breton Highlands metamorphic units, Nova Scotia, at the Atlantic Geoscience Society Colloquium, Amherst, Nova Scotia, January 17-18, 1986; abstract published in Maritime Sediments and Atlantic Geology, v. 22, no. 2, p. 200, 1986.

Raeseide, R.P., Barr, S.M., White, C.E., and Dennis, F.A.R., Geological mapping of North Mountain, northern Cape Breton Highlands, Nova Scotia, at the Atlantic Geoscience Society Colloquium, Amherst, January 17-18, 1986; abstract published in *Maritime Sediments and Atlantic Geology*, v. 22, no. 3, p. 201, 1986.

1986-87

Raeseide, R.P. and Barr, S.M., Possible Grenville basement in the Cape Breton Highlands, Nova Scotia, at the GAC/MAC/CGU Joint Annual Meeting, Ottawa, May 20, 1986; abstract published in *GAC/MAC/CGU Program with Abstracts*, v. 11, p. 116, 1986.

1987-88

Barr, S.M., Raeseide, R.P., and Loncarevic, D.B., Geological correlations between Cape Breton Island and Newfoundland, at the GAC/MAC 1987 Joint Annual Meeting, Saskatoon, May 26, 1987; abstract published in *GAC/MAC Program with Abstracts*, v. 12, p. 23, 1987.

1988-89

Raeseide, R.P. and Barr, S.M., The Bras d'Or zone : A suspect terrane in Cape Breton Island, Nova Scotia, 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. A102, 1988.

Raeseide, R.P., The metamorphic distribution of tectonostratigraphic terranes: An example for the northern Appalachians, Canada, at the International Geological Correlation Programme - Project 233, Annual Meeting, Terranes in the Variscan Belt of France and Western Europe, Montpellier, France, 1988.

1989-90

Barr, S.M. and Raeseide, R.P., The Avalon Terrane of the northern Appalachian Orogen in Nova Scotia and New Brunswick, Canada, at the 28th International Geological Congress, Washington, D.C., July 18, 1989; abstract published in *IGC Abstracts*, vol. 1, p. 1-91, 1989.

1.2.2.10 Geology of Hadrynian Jeffers Formation (F.W. Chandler)

a) Publications

1986-87

Pe-Piper, G., The late Hydrynian Jeffers Group, western Cobequid Hills, Nova Scotia; *in* Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 573-580, 1987.

Pe-Piper, G., Preliminary report of remapping of areas of the western Cobequid Hills, Nova Scotia; *in* Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Information Series No. 12, p. 173-175, November 1986.

1987-88

Pe-Piper, G. and Piper, D.J.W., The pre-Carboniferous rocks of the western Cobequid Hills; *in* *Maritime Sediments and Atlantic Geology*, v. 23, no. 1, p. 41-48, 1987.

1988-89

Pe-Piper, G. and Piper, D.J.W., The upper Hadrynian Jeffers Group, Cobequid Highlands, Avalon zone of Nova Scotia: A back-arc volcanic complex; *Geological Society of America Bulletin*, v. 101, no. 3, p. 364-376, March 1989.

Waldron, J.W.F., Piper, D.J.W. and Pe-Piper, G., Deformation of the Cape Chignecto pluton, Cobequid Highlands, Nova Scotia: Thrusting at the Meguma-Avalon boundary; *Atlantic Geology*, v. 25, no. 1, p. 51-62, 1989.

b) Open Files

1988-89

Pe-Piper, G. and Turner, D., The Jeffers Group, western Cobequid Hills, Nova Scotia; *Geological Survey of Canada, Open File 1782*, 90p., 4 maps (1:10,000 scale), September 1988.

c) Posters

1985-86

Pe-Piper, G. and Piper, D.J.W., Hadrynian and lower Palaeozoic geology of the western Cobequid Hills, at the Atlantic Geoscience Society Colloquium, Amherst, January 17-18, 1986; abstract published in *Maritime Sediments and Atlantic Geology*, v. 22, no. 2, p. 197, 1986.

1986-87

Pe-Piper, G., Turner, D. and Piper, D.J.W., Jeffers Group, Cobequid Hills, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986.

1987-88

Pe-Piper, G., Turner, D.E. and Piper, D.J.W., Hadrynian appinitic plutons with primary actinolite along the Cobequid Fault zone, Nova Scotia, at the GAC/MAC Joint Annual Meeting, Saskatoon, May 25, 1987; abstract published in *GAC/MAC Program with Abstracts*, v. 12, p. 79, 1987.

Pe-Piper, G., Turner, D.S. and Piper, D.J.W., Petrology and geochemistry of the Jeffers Brook dioritic complex, at the 1988 Atlantic Geoscience Society Colloquium, Antigonish, Nova Scotia, February 1988; abstract published in *Maritime Sediments and Atlantic Geology*, v. 24, no.2, p. 206, 1988.

d) Oral Presentations

1984-85

Pe-Piper, G., Macdonald, A., Boner, F., Blank, M. and Piper, D.J.W., Precambrian geology of the western Cobequid Hills, Nova Scotia, at the 1985 Atlantic Geoscience Society Symposium, Wolfville, January 18-19, 1985; abstract published in *Maritime Sediments and Atlantic Geology*, v. 21, nos. 1, 2, 3, p. 34, 1985.

1985-86

Pe-Piper, G. and Piper, D.J.W., Large mafic intrusions in Devonian-Carboniferous granites along the Cobequid fault, at the Atlantic Geoscience Society Colloquium, Amherst, January 17-18, 1986; abstract published in *Maritime Sediments and Atlantic Geology*, v. 22, no. 2, p. 197, 1986.

1987-88

Piper, D.J.W., Pe-Piper, G., Waldron, J.W.F., Murphy, B. and Cormier, R.F., Carboniferous faulting deformation and igneous intrusion in the western Cobequid Hills, at the Atlantic Geoscience Society, Colloquium '88, Antigonish, February 6, 1988; abstract published in *Maritime Sediments and Atlantic Geology*, v. 24, no. 2, p. 207, 1988.

1.2.2.11 Sedimentology of Goldenville-Halifax contact zone (F.W. Chandler)

a) Publications

1986-87

Waldron, J.W.F. and Graves, M., Preliminary report on sedimentology of sandstones, slates, and bioclastic carbonate material in the Meguma Group, Mahone Bay, Nova Scotia; in *Current Research, Part A, Geological Survey of Canada, Paper 87-1A*, p. 409-414, 1987.

Waldron, J.W.F., Stratigraphy and sedimentology of the Goldenville-Halifax transition in the Tancook Island area, south shore; in *Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Information Series No. 12*, p. 171-172, November 1986.

1988-89

Waldron, J.W.F., Determination of finite strain in bedding surfaces using sedimentary structures and trace fossils : A comparison of techniques; *Journal of Structural Geology*, v. 10, no. 3, p. 273-281, 1988.

b) Open Files

1987-88

Waldron, J.W.F., Sedimentology of the Goldenville-Halifax Transition in the Tancook Island area, South Shore, Nova Scotia; *Geological Survey of Canada, Open File 1535, 51p.*, 4 sheets, 3 appendices, July 1987.

c) Posters

1986-87

Waldron, J., Manganese-rich strata of the Goldenville-Halifax transition in the Mahone Bay area, south shore, Nova Scotia, at the Atlantic Geoscience Society 1987 Workshop and Symposium, Fredericton, February 6-7, 1987; abstract published in *Maritime Sediments and Atlantic Geology*, v. 23, no. 2, p. 110, 1987.

Waldron, J.M.F., Goldenville-Halifax transition, Tancook Island area, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 1986.

1.2.2.12 Geology of eastern Cobequid Highlands (F.W. Chandler)

a) Publications

1987-88

Murphy, J.B., Pe-Piper, G., Nance, R.D., and Turner, D.S., Summary of the geology of the eastern Cobequid Highlands; *in* Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 197-200, 1987.

Murphy, J.B., Pe-Piper, G., Nance, R.D., and Turner, D., A preliminary report on geology of the eastern Cobequid Highlands, Nova Scotia; *in* Current Research, Part B, Geological Survey of Canada, Paper 88-1B, p. 99-107, 1988.

Nance, R.D. and Murphy, J.B., Preliminary kinematic analysis of the Bass River Complex, Cobequid Highlands, Nova Scotia; *in* Current Research, Part B, Geological Survey of Canada, Paper 88-1B, p. 227-234, 1988.

1988-89

Miller, B.V., Nance, R.D. and Murphy, J.B., Preliminary kinematic analysis of the Rockland Brook Fault, Cobequid Highlands, Nova Scotia; *in* Current Research, Part B, Geological Survey of Canada, Paper 89-1B, p. 7-14, 1989.

Murphy, J.B., Pe-Piper, G. and Nance, R.D., Precambrian rocks of the eastern Cobequid Highlands, Nova Scotia; *in* Current Research, Part B, Geological Survey of Canada, Paper 89-1B, p. 15-21, 1989.

1989-90

Keppie, J.D., Murphy, J.B., Nance, R.D. and Dostal, J., Terranes of Nova Scotia: Characteristics and accretionary history; *in* Tectonothermal Expression of Terrane accretion within the Appalachian Orogeny: International Geological Correlation Programme - Project 233 Abstract Series, edited by R.D. Dallmeyer, Athens, Georgia, p. 51-57, July 22-24, 1989.

Murphy, J.B., Chapter 2: Tectonic environments and metamorphic characteristics of shear zones; *in* Mineralization and Shear Zones, edited by J.T. Bursnall, Geological Association of Canada Short Course Notes Volume 6, p. 29-49, 1989.

Murphy, J.B., Keppie, J.D. and Dostal, J., The geochemistry and petrology of the late Precambrian Georgeville Group: A volcanic arc rift succession in the Avalon terrane of Nova Scotia; *in* The Cadomian Orogeny, edited by C.G. Topley, R.A. Strachan, R.D. Beckinsale and R.S. D'Lemos, Journal of the Geological Society of London, Special Publication (in press).

Murphy, J.B. and Nance, R.D., A model for the evolution of the Avalon-Cadomian belt; *Geology*, v. 17, p. 735-738, 1989.

Nance, R.D. and Murphy, J.B., Kinematic history of the Bass River complex, Nova Scotia: Cadomian basement-cover relations in the Avalon terrane of the Canadian Appalachian; *in* The Cadomian Orogeny, edited by C.G. Topley, R.A. Strachan, R.D. Beckinsale and R.S. D'Lemos, Journal of Geological Society of London, Special Publications, (in press).

Nance, R.D. and Murphy, J.B., Break-up of a late Precambrian supercontinent and the evolution of the Avalonian-Cadomian belt; *in* Tectonothermal Expression of Terrane accretion within the Appalachian Orogeny: International Geological Correlation Programme - Project 233 Abstract Series, edited by R.D. Dallmeyer, Athens, Georgia, p. 75-78, July 22-24, 1989.

Pe-Piper, G., Murphy, J.B. and Turner, D.S., Petrology, geochemistry, and tectonic setting of some Carboniferous plutons of the Eastern Cobequid Hills; *Atlantic Geology*, v. 25, no. 1, p. 37-49, 1989.

Pe-Piper, G. and Murphy, J.B., Petrology of the Late Proterozoic Folly River Formation, Cobequid Highlands, Nova Scotia: A continent rift within a volcanic arc setting; *Maritime Sediments and Atlantic Geology*, (in press).

b) Open Files

1987-88

Murphy, J.B., Pe-Piper, G., Nance, D., Turner, D., and Piper, D.J.W., Preliminary geology map of the eastern Cobequid Highlands, Nova Scotia; Geological Survey of Canada, Open File 1755, 2 maps, scale 1:50,000, April 1988.

c) Posters

1987-88

Murphy, J.B., Pe-Piper, G., Nance, R.D., Turner, D.S. and Piper, D.J.W., A progress report on the geology of the eastern Cobequid Highlands, at the 1988 Atlantic Geoscience Society Colloquium, Antigonish, Nova Scotia, February, 1988; abstract published in *Maritime Sediments and Atlantic Geology*, v. 24, no.2, p. 205, 1988.

Murphy, J.B., Piper, D.W., Nance, D. and Turner, D., Geology of the eastern Cobequid Highlands, at the Nova Scotia Dept. of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

1988-89

Pe-Piper, G., Murphy, J.B. and Turner, D.S., Petrology and geochemistry of the Carboniferous plutons of the eastern Cobequid Hills, 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. A97, 1988.

Murphy, J.B., Pe-Piper, G., Nance, R.D. and Miller, B., Summary of the geology of the eastern Cobequid Highlands, at the Nova Scotia Department of Mines and Energy 12th Annual Review of Activities, Halifax, Nova Scotia, November 16-17, 1988; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 181-183, 1988.

d) Oral Presentations

1987-88

Nance, R.D., and Murphy, J.B., Kinematic history of the Bass River complex, Nova Scotia: Pan-African basement/cover relations in the Avalon Terrane of the Canadian Appalachians, at the International Geological Correlation Programme (IGCP) - Project 233, Conference on Tectonothermal Evolution of the West African Orogens and Circum-Atlantic Terrane Linkages, Nouakchott, Mauritania, December 8-20, 1987.

Turner, D.S., Pe-Piper, G. and Murphy, J.B., The Devonian-Carboniferous and Carboniferous plutons of the eastern Cobequid Highlands, at the Atlantic Geoscience Society, Colloquium '88, Antigonish, February 6, 1988; abstract published in Maritime Sediments and Atlantic Geology, v. 24, no. 2, p.216, 1988.

1988-89

Keppie, J.D., Dallmeyer, R.D. and Murphy, J.B., Episodic Proterozoic - Cambrian plutonism in the Avalon composite terrane of Nova Scotia: Constraints from $^{40}\text{Ar}/^{39}\text{Ar}$ hornblende ages, at the 24th Annual Meeting Northeastern Section Geological Society of American, New Brunswick, New Jersey, March 24, 1989; abstract published GSA-Northeastern Section Abstracts with Programs, v. 21, no. 2, p. 26, 1989.

Murphy, J.B., Keppie, J.D. and Dostal, J., Georgeville Group: Late Precambrian volcanic arc rift succession in the Avalon terrane of Nova Scotia, at the Special Meeting of the Geological Society of London, International Geological Correlation Programme - Project 233, British Terranes Research Group, Oxford, United Kingdom, April 6-8, 1988.

Murphy, J.B., Keppie, J.D., Nance, R.D. and Dostal, J., Reassessment of terranes in the Avalon composite terrane of Atlantic Canada, at the 24th Annual Meeting-Northeastern section, GSA, New Brunswick, New Jersey, March 24, 1989; abstract published in GSA-Northeastern Section Abstract with Programs, v. 21, no. 2, p. 54, 1989.

Murphy, J.B. and Pe-Piper, G., Late Precambrian development of a volcanic arc rift in the Avalon terrane of northern mainland Nova Scotia, 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. A89, 1988.

Nance, R.D. and Murphy, J.B., Kinematic history of the Bass River complex, Nova Scotia: Cadomian basement-cover relations in the Avalon terrane of the Canadian Appalachians, at the Special Meeting of the Geological Society of London, International Geological Correlation Programme - Project 233, British Terranes Research Group, Oxford, United Kingdom, April 6-8, 1988.

1989-90

Doig, R., Murphy, J.B. and Nance, R.D., Preliminary results of U-Pb geochronology, Cobequid Highlands, Avalon Terrane, Nova Scotia, at the GAC/MAC Annual Meeting, Montreal, Quebec, May 17, 1989; abstract published in GAC/MAC Program with Abstracts, v. 14, p. A126, 1989.

Miller, B.V., Nance, R.D. and Murphy, J.B., Precambrian thrust front to Carboniferous ductile shear zone: The evolution of the Rockland Brook Fault, Cobequid Highlands, Nova Scotia, at the GAC/MAC Annual Meeting, Montreal, Québec, May 15, 1989; abstract published in GAC/MAC Program with Abstracts, v. 14, p. A11, 1989.

Murphy, J.B., Keppie, J.D., Nance, R.D. and Dostal, J., The Avalon composite terrane of the northern Appalachians: Possible correlations, at the 28th International Geological Congress, Washington, D.C., July 18, 1989; abstract published in IGC Abstracts, vol. 2, p. 2-483, 1989.

Nance, R.D. and Murphy, J.B., Late Precambrian continental reconstructions and the evolution of the Avalonian-Cadomian Belt, at the GAC/MAC Annual Meeting, Montreal, Québec, May 17, 1989; abstract published in GAC/MAC Program with Abstracts, v. 14, p. A99, 1989.

Nance, R.D. and Murphy, J.B., Late Proterozoic evolution of the Avalonian-Cadomian belt in the northern Appalachians and western Europe, at the 28th International Geological Congress, Washington, D.C., July 13, 1989; abstract published in IGC Abstracts, vol. 2, p. 2-493, 1989.

1.2.2.13 Geology of Horton Group, Cape Breton Island (F.W. Chandler)

a) Publications

1987-88

Hamblin, A.P., Sedimentology tectonic control and resource potential of the Late Devonian - Early Carboniferous Horton Group, Cape Breton Island; in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 245-248, 1987.

Hamblin, A.P., A preliminary report on the sedimentology, tectonic control and resource potential of the Upper Devonian-Lower Carboniferous Horton Group, Cape Breton Island; in Current Research, Part B, Geological Survey of Canada, Paper 88-1B, p. 17-22, 1988.

1988-89

Hamblin, A.P., Basin configuration, sedimentary facies, and resource potential of the Lower Carboniferous Horton Group, Cape Breton Island, Nova Scotia; in Current Research, Part B, Geological Survey of Canada, Paper 89-1B, p. 115-120, 1989.

c) Posters

1987-88

Hamblin, A.P., Sedimentology of the Horton Group, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

1988-89

Hamblin, A.P., Basin configuration and sedimentary facies of the Horton Group, Cape Breton Island, at the Nova Scotia Department of Mines and Energy 12th Annual Review of Activities, Halifax, Nova Scotia, November 16-17, 1988; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 189-191, 1988.

1.2.2.14 Geology of Fourchu Group (F.W. Chandler)

a) Publications

1987-88

Barr, S.M. Macdonald, A.S., and White, C.E., The Fourchu Group and associated granitoid rocks of southeastern Cape Breton Island, Nova Scotia; in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 185-187, 1987.

Dennis, F.A.R., The Deep Cove pluton and associated polymetallic mineralization, Gabarus Bay, Cape Breton Island, Nova Scotia; in Maritime Sediments and Atlantic Geology, v. 23, no. 3, p. 97-98, 1987.

Thicke, M.J., Barr, S.M., and Sexton, A.J., Late Hadrynian metavolcanic rocks of southeastern Cape Breton Island: A favourable environment for precious and base-metal mineralization; in *Maritime Sediments and Atlantic Geology*, v. 23, no. 3, p. 109, 1987.

b) Open Files

1988-89

Barr, S.M., MacDonald, A.S. and White, C.E., The Fourchu Group and associated granitoid rocks, Coxheath Hills, East Bay Hills and southwestern Stirling and Coastal belts, southeastern Cape Breton Island, Nova Scotia; Geological Survey of Canada, Open File 1759, 15 p., 2 maps (1:50,000 scale), May 1988.

Barr, S.M., MacDonald, A.S. and White, C.E., Geological maps of the Coastal and Stirling Belts, southeastern Cape Breton Island, Nova Scotia; Geological Survey of Canada, Open File 1988, 2 maps (1:50,000 scale), March 1989.

c) Posters

1988-89

Barr, S.M., Macdonald, A.S., White, C.E. and Van Wagoner, N.A., The Fourchu Group and associated plutonic rocks of southeastern Cape Breton Island, Nova Scotia, at the Nova Scotia Department of Mines and Energy 12th Annual Open House and Review of Activities, Halifax, Nova Scotia, November 16-17, 1988; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 185-188, 1988.

Barr, S.M., White, C.E. and Macdonald, A.S., Late Hadrynian to Cambrian(?) sedimentary and volcanic rocks in southeastern Cape Breton Island, Nova Scotia, at the Atlantic Geoscience Colloquium on Current Research in the Atlantic Provinces, Amherst, Nova Scotia, February 3-4, 1989; abstract in *Atlantic Geology*, (in press).

1.2.2.15 Mabou Basin analysis (F.W. Chandler)

Project cancelled

1.2.2.16 Meguma veins (J.R. Henderson)

a) Publications

1986-87

Henderson, J.R., *Geology*, Ecum Secum area (Lat. 44°45'-45°18'; Long. 62°00'-62°30'); Geological Survey of Canada, map 1648A (1:50 000 scale); 1986.

Henderson, J.R., Wright, T.O., and Henderson, M.N., A history of cleavage and folding: An example from the Goldenville Formation, Nova Scotia; Geological Society of America Bulletin, v. 97, p. 1354-1366, 1986.

Henderson, M.N. and Henderson, J.R., Constraints on the origin of gold in the Meguma Zone, Ecum Secum area, Nova Scotia; Maritime Sediments and Atlantic Geology, v. 22, no. 1, p. 1-13, 1986.

1987-88

Henderson, J.R., Wright, T.O., and Henderson M.N., A history of cleavage and folding: an example from the Goldenville Formation, Nova Scotia: Discussion and reply; Geological Society of America, Bulletin, v. 100, p. 152-154, 1988.

1988-89

Henderson, J.R., Wright, T.O. and Henderson, M.N., Mechanics of formation of gold-bearing quartz veins, Nova Scotia; in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 221-223, 1988.

1989-90

Henderson, J.R., Wright, T.O. and Henderson, M.N., Mechanics of formation of gold-bearing quartz veins, Nova Scotia, Canada - Comment; Tectonophysics, v. 166, no. 4, p. 351-352, September 10, 1989,

b) Open Files

1986-87

Henderson, J.R. and Wyllie, R.J.S., Geochemical analysis of glacial drift and its application in base and precious metal exploration, Eastern Shore, Nova Scotia; Geological Survey of Canada, Open File 1321, July 1986.

c) Posters

1986-87

Henderson, J.R., Henderson, M.N., Mawer, C.K., Crocket, J.H., Clifford, P.M. and Fueton, F., Timing and origin of auriferous quartz veins, Meguma Terrane, Nova Scotia, at Gold'86-an International Symposium on the Geology of Gold Deposits, Toronto, September 28-October 1, 1986; abstract published in Gold'86 Poster Paper Abstracts edited by A.M. Chater, p. 70-71, 1986.

1987-88

Henderson, J.R. and Henderson, M.N., Meguma gold deposits - nested saddle reefs or early hydraulic extension fractures?, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 213-215, 1987.

d) Oral Presentations

1987-88

Henderson, J.R., Strain studies in the Meguma Group, Nova Scotia, at the Canadian Tectonics Group Annual Meeting, Thunder Bay, Ontario, October 1987.

Henderson, M.N., Timing of quartz veining and gold emplacement in the Goldenville Formation, at the Nova Scotia Chamber of Mines Symposium on Mineral Deposits of Nova Scotia, Halifax, November 1987.

Wright, T.O., Henderson, J.R., and Henderson, M.N., Paleoplumbines, cleavage and strain in the Meguma Group of Nova Scotia, at the Geological Society of America, 1987 Annual Meeting and Exposition, Phoenix, Arizona, Oct. 26, 1987; abstract published in GSA Abstracts with Programs, p. 899, 1987.

Wright, T.O., and Henderson, J.R., Strain studies in the Meguma Group of Nova Scotia, at the University of New Mexico, Albuquerque, New Mexico, November 1987.

1988-89

Henderson, J.R., Henderson, M.N., and Wright, T.O., Crack-seal texture in columnar-quartz veins : Implications for fluid pressure, time of vein formation and strain partitioning, at the GSA Annual Meeting, Denver, Colorado, October 31, 1988; abstract published in GSA Abstracts with Programs, v. 20, no. 7, p. A58, 1988; and in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p.219-220, 1988.

1.2.3 REGIONAL QUATERNARY STUDIES

1.2.3.1 Quaternary geology-till geochemistry, northern Nova Scotia and Cape Breton Island (R.R. Stea, NSDME)

(Project and funds transferred to Nova Scotia Department of Mines and Energy, beginning with 1986-87.)

a) Publications

1985-86

Myers, R.A. and Stea, R.R., Surficial mapping results: Pictou, Guysborough and Antigonish counties, Nova Scotia; in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 189-193, 1986.

Stea, R.R. and Finck, P.W., A northward flowing glacier in Cumberland, Colchester and Pictou counties: Geological evidence and effects on till geochemistry; in Nova Scotia Department of Mines and Energy, Report of Activities 1984, Report 85-1, p. 69-84, 1985

Stea, R.R. and Finck, P.W., A northward flowing glacier in Cumberland, Colchester and Pictou counties: Geological evidence and effects on till geochemistry; in Current Research, Part A, Geological Survey of Canada, Paper 86-1A, p. 809-824, 1986.

Stea, R.R., Finck, P.W., and Wightman, D.M., Quaternary geology and till geochemistry of the western part of Cumberland County, Nova Scotia (Sheet 9); Geological Survey of Canada, Paper 85-17, 58p., map 1630A, 1986.

c) Posters

1985-86

Myers, R.A. and Stea, R.R., Surficial mapping results: Pictou, Guysborough and Antigonish Counties, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985; summary report published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p. 73-77, 1985.

d) Oral Presentations

1985-86

Stea, R.R., Quaternary geology studies in northern Nova Scotia, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985.

Stea, R.R., The sequence of Wisconsinan ice flows in northern mainland Nova Scotia, Canada, at the Geological Society of America, Northeastern Section, 21st Annual Meeting, Klamesha Lake, New York, March 13, 1986; abstract published in GSA Abstracts with Programs 1986, v. 18, no. 1, p. 69, 1986.

1.2.3.2 Till sedimentology and geochemistry

Combined with project C1.2.3.1

1.2.4 REGIONAL GEOCHEMICAL STUDIES

1.2.4.1 Follow-up geochemical studies (P.J. Rogers, NSDME)

(Project and funds transferred to Nova Scotia Department of Mines and Energy, beginning with 1986-87.)

a) Publications

1985-86

Rogers, P.J. and MacDonald, M.A., Regional geochemical surveys; in Nova Scotia Department of Mines and Energy, Report of Activities 1984, Report 85-1, p. 55-67, 1985.

Rogers, P.J. and Motts, R., Geochemical surveys; in Nova Scotia Department of Mines and Energy, Report of Activities 1985, Report 86-1, p. 195-203, 1986.

b) Open Files

1987-88

Geochemical stream sediment and stream water maps for Cheticamp River (Open File 1307), Pleasant Bay (Open File 1308); and Dingwall (Open File 1309), Nova Scotia; Geological Survey of Canada, 16 maps, scale 1:50,000, September 28, 1987.

1988-89

Dunn, C.E., Banville, R.M.P. and Adcock, S.W., Reconnaissance biogeochemical survey, eastern Nova Scotia; Geological Survey of Canada, Open File 2002, 95p., 28 maps, May 24, 1989.

c) Posters

1985-86

Rogers, P.J. and Mills, R., Geochemical surveys in Nova Scotia, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985; summary report published in Nova Scotia Department of Mines and Energy, Information Series No. 9, p. 69-72, 1985.

d) Oral Presentations

1985-86

Rogers, P.J. and Garrett, R.G., Lithophile elements and exploration using centre-lake bottom sediments from the East Kemptville area, southern Nova Scotia, at the 11th International Geochemical Exploration Symposium, Toronto, Ontario, May 1, 1985; abstract published in 11th International Geochemical Exploration Symposium Programme and Abstracts, p. 76-77, 1985; and in the Nova Scotia Department of Mines and Energy, Report of Activities 1985, Nova Scotia Department of Mines and Energy, Report 86-1, p. 215-216, 1986.

1.2.5 GEOPHYSICAL STUDIES

1.2.5.1 Aeromagnetic gradiometer and VLF surveys (E.E. Ready)

a) Publications

1986-87

Geological Survey of Canada, High resolution aeromagnetic total field and vertical gradiometer survey in Liverpool Area, Nova Scotia; maps 21166G to 21181G, scale 1:25 000-Aeromagnetic total field maps; maps 41166G to 41181G, scale 1:25 000-Vertical gradient maps; Maps C21182G to C21186G, scale 1:25 000 - Combined aeromagnetic total field and VLF EM total field profiles; and Maps C41182G to C41186G, scale 1:50 000 - Combined aeromagnetic vertical gradient and VLF EM quadrature profiles, October 1986.

1987-88

Ready, E., and Teskey, D., Aeromagnetic total field, gradiometer, VLF surveys, Nova Scotia; in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 229-230, 1987.

Geological Survey of Canada, High resolution aeromagnetic total field maps, Musquodoboit area, Nova Scotia - C21283G to C21289G, scale 1:50,000 and vertical gradient maps - C41283G to C41289G, scale 1:50,000, November 30, 1987.

Geological Survey of Canada, High resolution aeromagnetic total field maps, Musquodoboit area, Nova Scotia; maps 21263G to 21282G, scale 1:25,000, 1987.

1988-89

Geological Survey of Canada, High resolution aeromagnetic total field and vertical gradiometer surveys in the Cobequid Hills area, Nova Scotia; 1:25,000 scale aeromagnetic total field maps 21338G to 21358G; 1:25,000 scale vertical gradient maps 41338G to 41358G, October 24, 1988.

Kiss, F.G., Ready, E.E., Stone, P.E. and Teskey, D.J., Aeromagnetic total field, gradiometer, and VLF-EM survey of the Cobequid Highlands, Nova Scotia; in Current Research, Part B, Geological Survey of Canada, Paper 89-1B, p. 1-5, 1989.

1989-90

Geological Survey of Canada, High resolution aeromagnetic total field and vertical gradiometer surveys of the Cobequid Hills area, Nova Scotia; 1:50,000 scale combined aeromagnetic (residual total field) and VLF EM total field profiles C21359G to C21366G; 1:50,000 scale combined vertical gradient and VLF EM quadrature profiles C41359G to C41366G, October 27, 1989.

b) Open Files

1987-88

Geological Survey of Canada, Aeromagnetic vertical gradient maps of Musquodoboit area, Nova Scotia; maps 41263G to 41282G, scale 1:25,000, 1987. Advance release of high resolution aeromagnetic vertical gradiometer maps in the Musquodoboit area, Nova Scotia; Geological Survey of Canada Open File 1537, 20 maps, scale 1:25,000, July 1987.

c) Posters

1985-86

Hood, P., et al, Applications of aeromagnetic gradiometer surveys, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-29, 1985.

1987-88

Aeromagnetic contract survey group, Aeromagnetic total field, gradiometer, VLF surveys, Nova Scotia, at the Geological Survey of Canada Current Activities Forum, Ottawa, January, 1988.

Teskey, D.J., Aeromagnetic total field, gradiometer and VLF surveys, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

1988-89

Ready, E.E., Kiss, F.G., Stone, P.E. and Teskey, D.J., Nova Scotia MDA-Aeromagnetic total field/gradiometer/VLF survey 1986-87, at the Geological Survey of Canada Current Activities Forum, Ottawa, Ontario, January 16-18, 1989.

Teskey, D.J., Ready, E.E., Stone, P.E. and Kiss, F.G., Aeromagnetic total field, gradiometer, VLF survey-Cobequid Highlands, Nova Scotia, at the Nova Scotia Department of Mines and Energy, 12th Annual Review of Activities, Halifax, Nova Scotia, November 16-17, 1988; abstract published in Nova Scotia Department of Mines and Energy, Report of Activities 1988, Part A, Report 88-3, p. 213-214, 1988.

d) Oral Presentations

1985-86

Haynes, S.J. and Hood, P.J., Application of airborne gradiometry to gold exploration, eastern Nova Scotia, at the GAC/MAC Joint Annual Meeting, Fredericton, May 16, 1985; abstract published in GAC/MAC Program with Abstracts, v. 10, p. A25.

1.2.5.2 Airborne gamma ray spectrometer and VLF surveys (K.L. Ford)

a) Publications

1986-87

Geological Survey of Canada, Geophysical Series Maps of an Airborne Gamma Ray Spectrometric, VLF and Magnetic Survey, Yarmouth Area, Southwestern Nova Scotia; 1:50 000 radiometric contour maps with accompanying 1:150,000 stacked profile booklets, including maps: 36520(9)G-Comeous Hill; 36520(16)-Yarmouth; 36620(11)-Lockeport-Baccaro; 36620(12)G-Pubnico-Cape Sable Island; 36620(13)G-Tusket; 36620(14)G-Shelburne; 36620(15)G-Port Mouton; 35121(4)G-Wentworth Lake-Meteghan; and map 29005G, scale 1:250 000 VLF (total field only) profile map of entire survey area, November 1986.

1987-88

Geological Survey of Canada, Airborne gamma ray spectrometric, VLF and magnetic survey, Cobequid Hills area, Nova Scotia, 1:50,000 radiometric contour maps (7 parameters) with accompanying 1:150,000 stacked profile booklets (11 parameters), including 35821(07)G-Cape Chignecto; 35821(08)G-Parrsboro; 35821(09)G-Springhill; 35821(10)G-Alma; 35511(05)G-Bass River; 35511(06)G-Truro; 35511(11)G-Tatamagouche-Malagash; 35511(12)G-Oxford; and map 39006G, scale 1:250,000, VLF profile maps of entire survey area; September 1987.

Geological Survey of Canada, Geophysical series maps of an airborne gamma ray spectrometer survey with VLF and magnetics, Cape Breton Highlands, Nova Scotia, 1:50,000 radiometric contour maps with accompanying 1:150,000 stacked profile booklets, including: 36111(2)G-Baddeck; 36111(3)G-Lake Ainslie; 36111(6)G-Margaree; 36111(7)G-St. Anns-Bras d'Or; 36111(9)G-Ingonish; 36111(10)G-Cheticamp River; and 1:250,000 VLF total field and quadrature profile map of entire Cape Breton survey area; October, 1987.

c) Posters

1989-90

Ford, K.L., Shives, R.B.K., Carson, J.M., Grant, J.A., Holman, P.B. and Hetu, R., Application of regional airborne gamma-ray spectrometry in the Appalachian region of Canada, at the 28th International Geological Congress, Washington, D.C., July 11, 1989; abstract published in IGC Abstracts, vol. 1, p. 1-500, 1989.

1.2.5.3 Geophysical tests, sandstone Pb deposit (P.G. Killeen)

a) Publications

1986-87

Mwenifumbo, C.J., and Killeen, P.G., Multiparameter borehole geophysical measurements at the Yava lead deposit: a progress report; in Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Information Series No. 12, p. 199-200, November, 1986.

1987-88

Mwenifumbo, C.J., Killeen, P.G., and Cinq-Mars, A., Downhole geophysics at the Yava lead deposit, 1987 field season; in Nova Scotia Department of Mines and Energy, Report of Activities 1987, Part A, Report 87-5, p. 231-234, 1987.

c) Posters

1986-87

Mwenifumbo, C.J. and Killeen, P.G., Application of borehole geophysics to sandstone Pb deposits: the Yava deposit, Nova Scotia, at the Geological Survey of Canada Current Activities Forum, Ottawa, January 1987.

1987-88

Killeen, P.G., Mwenifumbo, C.J. and Schock, L.D., Development of a downhole assaying technique for heavy metals, at the Third Decennial International Conference on Geophysical and Geochemical Exploration for Minerals and Groundwater, Exploration '87, Toronto, September 1987; abstract published in Technical Program Abstracts, p. 54, 1987.

Cinq-Mars, A. and Mwenifumbo, C.J., Yava lead deposit, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

d) Oral Presentations

1986-87

Killeen, P.G. and Mwenifumbo, C.J., Borehole geophysics: application of new techniques to exploration, at British Columbia Geophysical Society meeting, January 1987; and at the 55th Annual Meeting of the Prospectors and Developers Association of Canada, Toronto, March 11, 1987.

1987-88

Mwenifumbo, C.J., Killeen, P.G., and Cinq-Mars, A., Downhole geophysics at the Yava lead deposit, at the Symposium on Minerals and Geotechnical Logging, Golden, Colorado, October 1987; and at the IAEA meeting on nuclear borehole techniques for mineral exploration, Ottawa, December 1987.

1.2.5.4 Follow-up of airborne gamma ray spectrometer anomalies (K.L. Ford)

a) Publications

1985-86

Ford, K.L. and O'Reilly, G.A., Airborne gamma ray spectrometric surveys as an indicator of granophile element specialization and associated mineral deposits in the granitic rocks of the Meguma Terrane of Nova Scotia, Canada; in *High Heat Production (HHP) Granites, Hydrothermal Circulation and Ore Genesis, Proceedings, Institution of Mining and Metallurgy*, p. 113-133, (map in pocket), 1985.

1986-87

Ford, K.L. and Carson, J.M., Application of airborne gamma ray spectrometric surveys, Meguma Terrane, Nova Scotia; *Maritime Sediments and Atlantic Geology*, v. 22, no. 1, p. 117-135, 1986.

1988-89

O'Reilly, G.A., Corey, M.C. and Ford, K.L., The role of airborne gamma-ray spectrometry in bedrock mapping and mineral exploration : Case studies from granitic rocks within the Meguma zone, Nova Scotia; *Maritime Sediments and Atlantic Geology*, v.24, p. 47-60, 1988.

Ford, K.L., Carson, J.M., Grant, J.A. and Holman, P.B., Radioactivity maps of Nova Scotia (1:500,000 scale); Geological Survey of Canada, map 35006G, 1989.

b) Open Files

1987-88

Geological Survey of Canada, Airborne gamma ray spectrometric colour maps and VLF-EM profile maps, Ship Harbour area, Nova Scotia (11D/15); Open File 1472, scale 1:50,000, May 1987.

Geological Survey of Canada, Airborne gamma ray spectrometric colour maps and VLF-EM profile maps, Eastern Liscomb pluton, Nova Scotia (parts of 11E/1, 2, 7, 8); Open File 1473, September 24, 1987.

Geological Survey of Canada, Airborne gamma ray spectrometric colour maps and VLF-EM profile maps, Tantallon area, Nova Scotia (part of 11D/12); Open File 1474, September 24, 1987.

Geological Survey of Canada, Airborne gamma ray spectrometric colour maps and VLF-EM profile maps, Big Indian Lake area, Nova Scotia (part of 11D/13); Open File 1475, September 24, 1987.

Geological Survey of Canada, Airborne gamma ray spectrometric colour maps and VLF-EM profile maps, Gibraltar Hill area, Nova Scotia; Open File 1476, September 24, 1987.

Geological Survey of Canada, Airborne gamma ray spectrometric colour maps and VLF-EM profile maps, Granite Lake area, Nova Scotia (part of 11D/14); Open File 1477, September 24, 1987.

1988-89

Geological Survey of Canada, Preliminary release of airborne gamma ray spectrometric colour maps : Davis Lake Complex, East Kemptville area, Nova Scotia (Parts of 20P/13, 21A/3, 4, 5, 6); Geological Survey of Canada, Open File 1784, 8 maps (1:100,000 scale), May 20, 1988.

1989-90

Geological Survey of Canada, Airborne gamma ray spectrometric maps, Davis Lake complex, East Kemptville area, Nova Scotia (Parts of 20P/13, 21A/13, 21A/3 - 6); 7 black line contour maps, 1 profile map (total field magnetic) at 1:50,000 scale; 1 booklet of stacked profiles displaying 11 parameters at 1:100,000 scale, Open File 1784, July 1989.

c) Posters

1987-88

Ford, K.L., Carson, J.M., and Shives, R., Radioelement map of Nova Scotia, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

K.L. Ford, Holman, P.B. and Grasty, R.L., Application of airborne gamma ray spectrometry to geological mapping and mineral deposits studies in Nova Scotia and the Winnipeg River Area, Manitoba, at the Third Decennial International Conference on Geophysical and Geochemical Exploration for Minerals and Groundwater, Exploration '87, Toronto, September, 1987; abstract published in Technical Program Abstracts, p. 67, 1987.

1988-89

Ford, K.L., Carson, J.M., Grant, J. and Holman, P.B., Radioactivity maps of Nova Scotia, at the Nova Scotia Department of Mines and Energy, 12th Annual Open House and Review of Activities, Halifax, Nova Scotia, November 16-17, 1988.

d) Oral Presentations

1985-86

Ford, K.L. and O'Reilly, G.A., Airborne gamma ray spectrometric surveys as an indicator of granophile element specialization and associated mineral deposits, at the Institution of Mining and Metallurgy, St. Austell, Cornwall, September 1985.

1.3 MINERAL SUPPORT SUBPROGRAM

1.3.3 Overhead costs (W.H. Poole)

No Outputs.

PUBLIC INFORMATION, EVALUATION AND ADMINISTRATION PROGRAM

Co-ordination of federal geoscience program (W.H. Poole)

c) Posters

1984-85

Mineral Development Program Office, Index map showing location of GSC projects within Nova Scotia MDA during 1984-85, at the Nova Scotia Department of Mines and Energy, 8th Annual Open House and Review of Activities, Halifax, Nova Scotia, November 28-29, 1984.

1985-86

Mineral Development Program Office, Index map showing location of GSC projects within Nova Scotia MDA during 1985-86, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, Nova Scotia, November 27-28, 1985.

1986-87

Mineral Development Program Office, Index map showing location of GSC projects within Nova Scotia MDA during 1986-87, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, Nova Scotia, November 19-20, 1986.

1987-88

Mineral Development Program Office, Index map showing location of GSC projects within Nova Scotia MDA during 1987-88, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

1988-89

Mineral Development Program Office, Index map showing location of GSC-MDA projects within Nova Scotia during 1988-89, at the Nova Scotia Department of Mines and Energy, 12th Annual Open House and Review of Activities, Halifax, November 16-17, 1988.

d) Oral Presentations**1985-86**

Chandler, F.W., Geoscience program of Nova Scotia MDA implemented by GSC during 1985-86, at the Nova Scotia Department of Mines and Energy, 9th Annual Open House and Review of Activities, Halifax, November 27-28, 1985.

1986-87

Sangster, A.L., Geoscience program of Nova Scotia MDA implemented by GSC during 1986-87, at the Nova Scotia Department of Mines and Energy, 10th Annual Open House and Review of Activities, Halifax, November 19-20, 1986.

1987-88

Poole, W.H., Geoscience program of Nova Scotia MDA implemented by GSC during 1987-88, at the Nova Scotia Department of Mines and Energy, 11th Annual Open House and Review of Activities, Halifax, November 1987.

1988-89

Sangster, A.L., Geoscience program of Nova Scotia MDA implemented by GSC during 1988-89, at the Nova Scotia Department of Mines and Energy, 12th Annual Open House and Review of Activities, Halifax, Nova Scotia, November 16-17, 1988.