

GOVERNMENT

Yukon Geology Program

Grant Abbott
Yukon Geology Program

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Yukon Geology Program

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Abbott, J.G. 1999. Yukon Geology Program. *In: Yukon Exploration and Geology 1998*, C.F. Roots and D.S. Emond (eds.); Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 35-44.

OVERVIEW

Now in its third year, the Yukon Geology Program (Fig. 1) is a *de facto* Yukon Geological Survey consisting of two integrated and jointly managed offices with different administrative structures (Fig. 2). Federal funding is provided through the Exploration and Geological Services Division of the Department of Indian Affairs and Northern Development (DIAND), and territorial and cost-shared (YTG/DIAND) funding comes through the Mineral Resources Branch of the Department of Economic Development (Yukon Government, YTG). The Geological Survey of Canada (GSC) also maintains an office with the Program.



Figure 1. Top row, from left: Jason Adams, Charlie Roots, Tammy Allen, Will van Randen.

Bottom; standing, from left: Gord Nevin, Diane Emond, Grant Lowey, Jo-Anne van Randen, Lee Pigage, Maurice Colpron, Shirley Abercrombie, Danièle Héon, Ali Wagner (front), Panya Lipovsky (back), Kaori Torigai, Jeff Bond, Grant Abbott, Julie Hunt (back), Lisabeth Bryan (front), Robert Deklerk (back), Bill LeBarge (front), Mike Burke, Don Murphy, Craig Hart.

The past year saw some stability and growth after the uncertainty and change of the previous year. Five managers completed their first full year in new jobs. In DIAND, they were: Terry Sewell, Regional Director General; Bob Holmes, Director, Mineral Resources Directorate; and Grant Abbott, Acting Chief Geologist, Exploration and Geological Services Division. In YTG they were: Jesse Duke, Acting Director, Mineral Resources Branch and Shirley Abercrombie, Acting Manager, Mineral Resources Branch. Five geological positions were filled. Lee Pigage and Maurice Colpron will undertake regional mapping, Jeff Bond is in a term position to undertake till geochemical surveys, Jo-Anne van Randen is also in a term position as a resource assessment geologist, and Gord Nevin is our GIS technician. The Program is now operating at full strength for the first time in three years.

Negotiations to devolve the responsibilities of the Northern Affairs Program to YTG are ongoing. Conclusion of negotiations on outstanding issues is expected before release of this publication. If they are successful, transfer could be completed as early as the end of 1999, a year later than originally planned.

PROGRAM HIGHLIGHTS FOR 1998

The Yukon Geology Program (YGP) in 1998 supported three regional bedrock mapping projects, two mineral deposit studies, two placer deposit studies, a till geochemistry study, two staff geologists, one Yukon Minfile geologist, two resource assessment geologists, and one GSC mapper. Several other projects were also funded through contributions to the Geological Survey of Canada and to university researchers. Figure 3 is a summary of available geological maps and regional geochemical and geophysical maps from the Yukon Geology Program.

FIELDWORK

Recent massive sulphide discoveries in the Finlayson Lake District have helped to stimulate research interest in the Yukon-Tanana Terrane and other pericratonic terranes in the northern Cordillera. The Yukon Geology Program is playing a significant role in the Ancient Pacific Margin NATMAP proposal. This

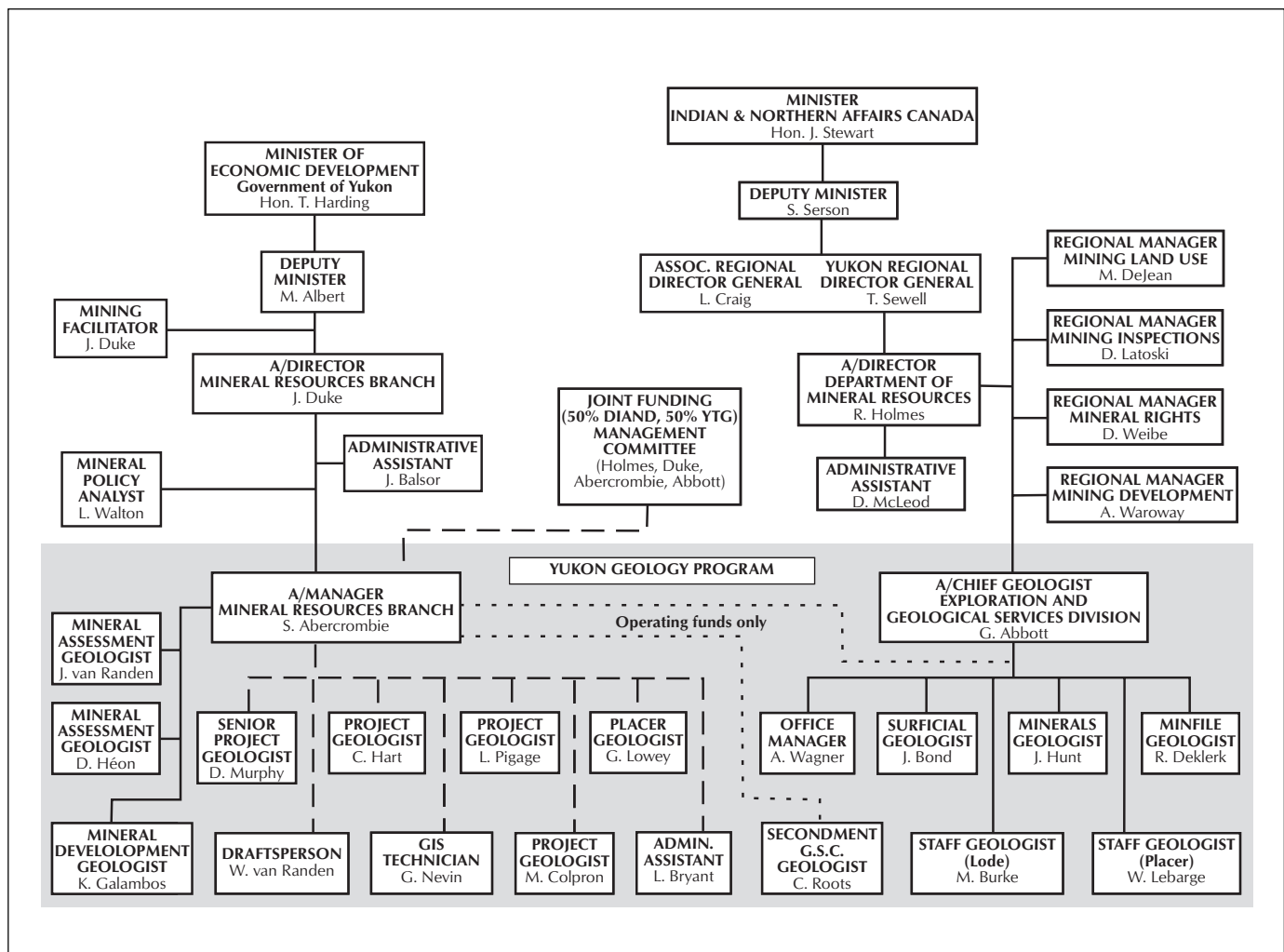


Figure 2. Yukon Mineral Resources organization chart.

cooperative effort involves the Geological Survey of Canada, the British Columbia Geological Survey (BCGS) and the universities of Alberta, British Columbia and Victoria. The project, if approved, will examine critical localities in British Columbia, Yukon and possibly Alaska. The Yukon Geology Program will continue mapping by Don Murphy in the Finlayson Lake area, and by Maurice Colpron in the Glenlyon area. In the Stewart River area, where most of the Yukon's placer gold deposits are located, placer deposit studies by Grant Lowey will accompany surficial mapping by Lionel Jackson of the GSC. The Geological Survey of Canada contribution will include Steve Gordey in the Stewart River map area, Charlie Roots in the western half of Wolf Lake map area, and in the northern half of Jennings River map area with Joanne Nelson and Mitch Mihalynuk of the BCGS.

The closure of the Faro mine at the beginning of the year was a major blow to the Yukon economy. Remaining reserves in the Anvil District are uneconomic at present, but significant exploration potential remains. The YGP has embarked on several projects to capture, synthesize, and enhance the geological database that owners of the mine have accumulated over the last 30 years. Lee Pigage who has 20 years of mapping and exploration experience in the district is overseeing the project, and has begun compilation and bedrock mapping at 1:25 000 scale. Litho-geochemical studies by Cliff Stanley of Acadia University will test reports by exploration geologists of visual alteration of host rocks above the Grizzly (formerly Dy) deposit. The study could define a new exploration tool for the district. Jeff Bond is mapping the surficial geology of the district and has completed a case study of till geochemistry down-ice from the Faro deposit.

Placer deposit studies were also a main focus. After completing a compilation map of the geology of the White Channel gravels in the Klondike district, Grant Lowey began studies of placer deposits in the Stewart River map area. This project will be part of the proposed Ancient Pacific Margin NATMAP project. In partnership with the Mining Inspections Division of the Northern Affairs Program, Bill LeBarge and Mark Nowosad from Okanagan College began a new project to study the relationship between sedimentology, grain size distribution, and water quality of effluent from placer deposits. Data gathered from this study should assist with the review of the Yukon Placer Authorization, scheduled for 2001.

Julie Hunt is in the final year of her study of volcanogenic massive sulphide deposits (VMS). Her focus was the geological setting of the Wolf deposit, in Devonian-Mississippian volcanic rocks on the Pelly Cassiar Platform. The Wolf deposit is a new discovery which has re-ignited exploration interest in the rocks of Ancient North America after so much recent attention was paid to VMS deposits of similar age in adjacent Yukon-Tanana terrane.

Craig Hart postponed a good part of the third year of his metallogenic study of the Dawson Range. Forest fires and a

shortage of helicopters forced him to change course and focus on precious metal occurrences related to the Tombstone suite of Cretaceous intrusions. These include the Brewery Creek gold deposit and in Alaska, the Fort Knox and True North gold deposits. In the Dawson Range, Craig has not only the task of putting the wide variety of intrusion-related precious and base-metal deposits into their regional context, but is also compiling new 1:50 000 scale geology maps based on interpretation of geophysical surveys that were funded by the 1990-1996 Canada-Yukon Economic Development Agreement. Interest in the Dawson Range may be spurred next year by the recent realization that several of the gold occurrences and deposits in it are the same age as the exciting new Pogo gold discovery on trend to the west in Alaska.

OTHER PROJECTS

The Yukon Geology Program supported the work of several scientists of the Geological Survey of Canada. Charlie Roots is nearing completion of a final report for Lansing map area. This will be the completion of a seven-year-long project to map Mayo and Lansing map areas. Steve Gordey is completing the compilation of a digital geological map of the Yukon. The map is expected to be released on CD-ROM in March, 1999 and will be a significant step forward in our efforts to produce digital products and to manage the large amount of geological information now available in the Yukon. Alejandra Duk-Rodkin received support to produce a glacial limits map of the Yukon to mark the centennial of the Klondike Gold Rush in 1998. Part of this project has resulted in a significant reinterpretation of the early glacial history of Stewart River map area which will lead to a much better understanding of the remaining placer potential there. The glacial limits map will be integrated with the digital bedrock compilation.

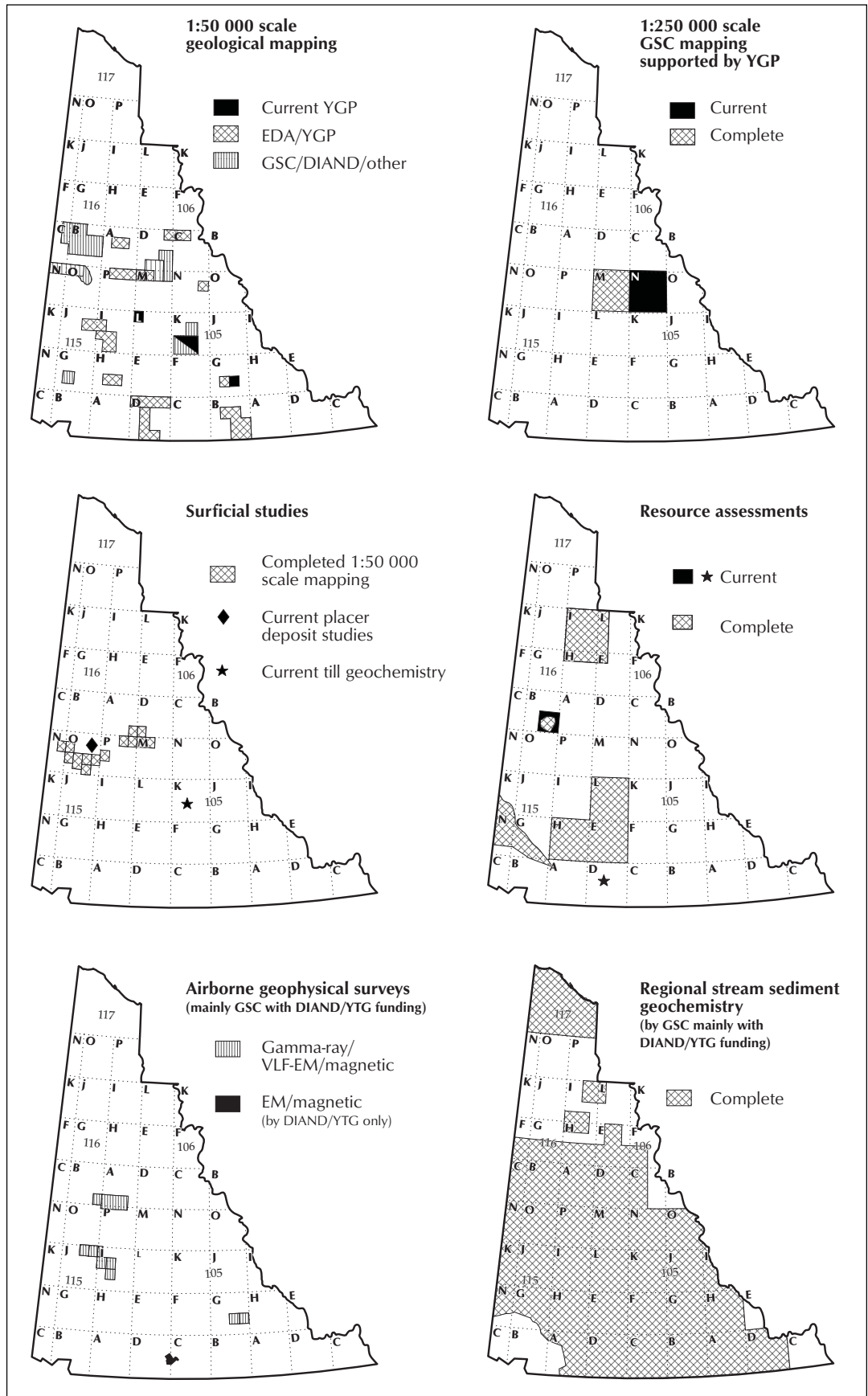
INDUSTRY LIAISON AND SUPPORT

Mike Burke and Bill LeBarge, our main links to the exploration industry, continued to monitor Yukon hard rock and placer mining and mineral exploration activity, visit active properties, review reports for assessment credit, and maintain the assessment report library.

YUKON MINFILE

Yukon MINFILE, the Yukon's inventory of mineral occurrences, and another mainstay of the Yukon Geology Program, is maintained by Robert Deklerk. We have completed an upgrade from Foxbase to Microsoft Access Version 2 and are now proceeding with an upgrade to Access 97 with major revision and simplification of the database structure. Paper copies of the text version are available through Exploration and Geological Services Division, and the updated digital version will be released on CD-ROM this spring and sold by Hyperborean Productions in Whitehorse.

Figure 3. Summary of available geological maps and regional geochemical surveys in the Yukon. Not shown are 1:250 000 scale geological maps and regional aeromagnetic maps which cover most of the Territory, and are published by the Geological Survey of Canada.



YUKON GEOPROCESS FILE

The Yukon Geoprocess File, under the direction of Diane Emond, is an inventory of information on geological process and terrain hazards, and also includes references and summaries of bedrock and surficial geology. The Geoprocess File is intended as a planning aid for development activities and is available for most areas south of 66° latitude.

H.S. BOSTOCK CORE LIBRARY

The H.S. Bostock Core library is maintained by Robert Deklerk. The facility contains about 128,000 m of diamond drill core from about 200 Yukon mineral occurrences. Confidentiality of material is determined on the same basis as mineral assessment reports. Confidential core can be viewed with a letter of release from the owner. Rocks saws and other rock preparation equipment are available to the public.

MINERAL RESOURCE ASSESSMENTS

The Yukon Geology Program is responding to an increasing need for geological and metallogical information to assist resolution of land use issues and conflicts. Some of the pressures have come from native land claims negotiations, and localized land use conflicts such as one within the city limits of Whitehorse, but most important is the priority of the Yukon government to implement a Protected Areas Strategy by the year 2000. The Yukon Protected Area Strategy will result in protection and withdrawal of land in all 23 ecoregions in the Yukon. YTG plans to provide efficient and cost-effective input into the selection process by undertaking a Yukon-wide mineral potential study under the direction of Danièle Héon in the spring of 1999.

YUKON MINING INCENTIVE PROGRAM

The Yukon Government provides grants for grassroots exploration and initial development of properties. This year, under the supervision of Ken Galambos, \$378,000 was distributed to 27 prospectors.

PUBLICATIONS

The Yukon Geology Program is now converted to fully digital publishing. All geological maps are now printed, and new publications are being produced, from a digital format, on-demand. This advance will greatly reduce our printing and storage costs. We expect to eventually sell digital files through our website.

Appendix 1 is a summary of recent references including Yukon Geology Program publications and maps, articles in outside journals, theses and other Yukon publications of interest.

Yukon Geology Program publications are published by Exploration and Geological Services Division, DIAND and are available through:

Geoscience Information and Sales
c/o Whitehorse Mining Recorder
102-300 Main Street
Whitehorse, Yukon Y1A 2B5
Phone (867) 667-3266, Fax. (867) 667-3267

To learn more about the Yukon Geology Program, visit our homepage at
<http://www.yukonweb.com/government/geoscience/>
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RÉSUMÉ

Le Programme d'études géologiques du Yukon est un programme intégré réalisé à frais partagés par la Division de l'exploration et des services géologiques des Affaires indiennes et du Nord Canada (MAINC), la Division des ressources minérales du gouvernement du Yukon et la Commission géologique du Canada de Ressources naturelles Canada. Nous recueillons, compilons et communiquons des informations sur la géologie et les gisements de minéraux au Yukon.

Notre principale activité est de dresser des cartes géologiques, qui sont essentielles à la prospection, aux recherches géologiques et à la planification de l'utilisation des terres. Depuis 1991, nous avons produit vingt cartes sur le substratum rocheux à l'échelle de 1/50 000. Plus tard au cours de l'année, les données cartographiques numériques que compile actuellement à l'échelle de 1/250 000 la Commission géologique du Canada, seront diffusées.

La cartographie des dépôts superficiels en appui à l'exploitation des placers est également une priorité. Pendant l'année, des projets de cartographie, de compilation et d'évaluation de placers ont continué, soit :

- 1) le projet de recherche sur le placer Mayo; et
- 2) les études sur le placer de la région Rivière Stewart. Une nouvelle carte des limites glaciaires est en outre en cours de production en collaboration avec la Commission géologique pour commémorer le centenaire de la ruée vers l'or.

Deux études géologiques spécifiques ont été amorcées :

- 1) une sur les gisements de sulfures massifs volcanogènes dans le terrane Yukon-Tanana, la plate-forme de Pelly-Cassiar et le bassin de Selwyn; et
- 2) une autre sur les gisements de métaux précieux et communs dans le chaînon Dawson.

Des études sur le potentiel minéral sont entreprises au besoin (p. ex. associées aux revendications territoriales des Premières Nations, aux parcs, etc.). Elles permettent de donner aux décideurs une évaluation actuelle du potentiel minéral de façon à ce que le retrait des terres soit fondé sur des informations les plus exhaustives possibles.

Les données géochimiques et géophysiques recueillies au Yukon peuvent être obtenues en s'adressant à la Commission géologique du Canada. Des données géochimiques sur les sédiments fluviaux et l'eau à l'échelle régionale ont été recueillies dans presque tout le territoire. Des levés géophysiques multiparamétriques aériens ont été réalisés dans les régions du chaînon Dawson, des monts Tombstone et du lac Finlayson.

Le Programme d'études géologiques du Yukon consiste à diriger des activités d'exploration minérale et entretient des rapports étroits avec l'industrie minérale. Nous gérons la base de données Minfile sur le Yukon ainsi que la compilation de données géologiques et historiques sur toutes les occurrences minérales connues du Yukon, qui s'élèvent à plus de 2 500. Le fichier de Minfile sur les placers est en cours d'élaboration et sera diffusé plus tard au cours de l'année. Le fichier GEOPROCESS du Yukon est un résumé de la géologie, des processus géologiques et des dangers liés au terrain. Nous produisons également deux publications annuelles: Yukon Exploration and Geology et Yukon Placer Activity. La carothèque H.S. Bostock contient quelque 128 000 m de carottes extraites à la foreuse au diamant dans 200 propriétés minières au Yukon.

Le Programme d'incitatifs à l'exploitation minière du Yukon, mis sur pied par le gouvernement du Yukon, appuie financièrement les prospecteurs (< 10 000 \$ par année) et les sociétés d'exploration (< 20 000 \$ par année) dans le but de promouvoir la prospection, l'exploration minérale et la mise en valeur minière au Yukon.

Pour en savoir plus long sur le Programme d'études géologiques du Yukon, visitez notre page d'accueil à <http://www.yukonweb.com/government/geoscience/> ou communiquez directement avec :

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Affaires indiennes et du Nord canadien
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Shirley Abercrombie, Gestionnaire intérimaire
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Ministère de l'expansion économique
C.P. 2703
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On peut obtenir des exemplaires des publications du Programme d'études géologiques du Yukon en s'adressant à :

Bureau d'information et des ventes en géosciences
a/s Conservateur des registres miniers
Affaires indiennes et du Nord canadien
300 rue Main-bur.102
Whitehorse (Yukon) Y1A 2B5
Téléphone : (867) 667-3266

APPENDIX 1: RECENT PUBLICATIONS

GEOSCIENCE MAPS

Geoscience Map 1998-1: Surficial geology of Sprague Creek map area, central Yukon (115P/15; 1:50 000 scale), by Jeffrey Bond.

Geoscience Map 1998-2: Surficial geology of Seattle Creek map area, central Yukon (115P/16; 1:50 000 scale), by Jeffrey Bond.

Geoscience Map 1998-3: Surficial geology of Mount Haldane map area, central Yukon (105M/13; 1:50 000 scale), by Jeffrey Bond.

Geoscience Map 1998-4: Surficial geology of Keno Hill map area, central Yukon (105M/14; 1:50 000 scale), by Jeffrey Bond.

Geoscience Map 1998-5: Surficial geology of North McQuesten River map area, central Yukon (115A/1; 1:50 000 scale), by Jeffrey Bond.

Geoscience Map 1998-6: Surficial Geology of Dublin Gulch map area, central Yukon (106D/4; 1:50 000 scale), by Jeffrey Bond.

Geoscience Map 1998-7: Surficial Geology of Matson Creek and Ogilvie (115N/9 and 115O/12; 1:50 000 scale to accompany O.F. 1998-1), by C. Mougeot and L. Walton.

Geoscience Map 1998-8: Surficial Geology of Garner Creek (115O/13; 1:50 000 scale to accompany O.F. 1998-1) by C. Mougeot and S. Morison.

Geoscience Map 1998-9: Geological map of Slats Creek area, Wernecke Mountains, Yukon (106D/16; 1:50 000 scale), by Derek J. Thorkelson.

Geoscience Map 1998-10: Geological map of Fairchild Lake area, Wernecke Mountains, Yukon (106C/13; 1:50 000 scale), by Derek J. Thorkelson.

Geoscience Map 1998-11: Geological map of Dolores Creek area, Wernecke Mountains, Yukon (106C/14; 1:50 000 scale), by Derek J. Thorkelson.

OPEN FILES

Open File 1998-1: Surficial geology and sedimentology of Garner Creek, Ogilvie, and Matson Creek map areas (115O/13, 115O/12 and 115N/9, east half), by Stephen Morison with contributions from Lori Walton and Charlotte Mougeot (includes Geoscience Maps 1998-7,8).

Open File 1998-2: White Channel Gravel, Klondike Gold Fields, Yukon, Canada, by G.W. Lowey (Poster available in French and English).

Open File 1998-3: Preliminary geological map, Little Kalzas Lake, central Yukon (105L/13; 1:50 000 scale), by Maurice Colpron.

Open File 1998-4: Preliminary geological map of Wolverine Lake area, Pelly Mountains, southeastern Yukon (105G/8, north half; 1:50 000 scale), by Donald C. Murphy and Steve Piercey.

Open File 1998-5: Preliminary geological map of the Mount Vermilion area, southern Yukon (parts of 105G/5 and 105G/6; 1:25 000 scale), by J.A. Hunt.

OUTSIDE ARTICLES

Hunt, J.A., 1998. Recent discoveries of volcanic-associated massive sulphide deposits in the Yukon. *CIM Bulletin*, vol. 91, No. 1017.

Lowey, G. W., 1998. A new estimate of the amount of displacement on the Denali Fault system based on the occurrence of carbonate megaboulders in the Dezadeash Formation (Jura-Cretaceous), Yukon, and the Nutzotin Mountains sequence (Jura-Cretaceous), Alaska. *Bulletin of Canadian Petroleum Geology*, vol. 46, no. 3, p. 379-386.

Miller, L.D., Goldfarb, R.J., Nie, F.J., Hart, C.J.R., Miller, M.L., Yueqing Yang, Y. and Liu, Y., 1998. North China Gold: A product of multiple orogens. *Society of Economic Geologists Newsletter*, No. 33, p. 1-12.

Wynne, P.J., Enkin, R.J., Baker, J., Johnston, S.T. and Hart, C.J.R., 1998. The Big Flush — Paleomagnetic signature of a 70 Ma regional hydrothermal event in displaced rocks of the northern Canadian Cordillera. *Canadian Journal of Earth Sciences*, vol. 35, p. 657-671.

ABSTRACTS

Enkin, R.J., Wynne, P.J., Baker, J., Johnston, S.T. and Hart, C.J.R., 1998. The Big Flush — Paleomagnetic signature of a 70 Ma regional hydrothermal event in displaced rocks of the northern Canadian Cordillera. *LITHOPROBE Snorcle Report* 64.

Harris, M.J., Symons, D.T.A., Blackburn, W.H. and Hart, C.J.R., 1998. The northern Canadian Cordillera: paleomagnetic evidence for NAFTA. *Geological Society of America Programs with Abstract*, vol. 30, No. 7, p. A355.

Harris, M.J., Symons, D.T.A., Blackburn, W.H. and Hart, C.J.R., 1998. Late Cretaceous tectonic motions "North of 60°": Paleomagnetic evidence from the Mount Lorne Stock, Yukon. *EOS*, vol. 79, AGU Spring meeting, Boston, Mass., p. S63.

Harris M.J., Symons, D.T.A., Blackburn, W.H. and Hart, C.J.R., 1998. Late Cretaceous-Eocene motion of the Stikine terrane: Paleomagnetic evidence from the 75 Ma Mount Lorne Stock, Yukon, Canada. *EOS*, vol. 79, AGU Fall meeting, San Francisco, p. F220.

- Harris, M.J., Symons, D.T.A., Blackburn, W.H. and Hart, C.J.R., 1998. Jurassic motions of the Canadian Cordillera: Paleomagnetic evidence from the Guichon Batholith, B.C. and the Teslin Stock, Y.T. GAC/MAC Program and Abstracts, vol. 23, Quebec City, p. A73.
- Harris, M.J., Symons, D.T.A., Hart, C.J.R. and Blackburn, W.H., 1998. An Early Eocene end for northward displacement of the Coast Plutonic Complex in northern Canada and Alaska, from paleomagnetism. GAC/MAC Program and Abstracts, vol. 23, p. A73, Quebec City.
- Harris, M.J., Symons, D.T.A., Blackburn, W.H. and Hart, C.J.R., 1997. Tectonic motion of the Jurassic Fourth of July Batholith, northern British Columbia, from paleomagnetism. EOS, vol. 78, AGU Fall meeting, Abstracts and Program, San Francisco, p. F188.
- Harris, M.J., Symons, D.T.A. and Hart, C.J.R., 1997. Regional conglomerate test for orogenic remagnetization of plutons in the northern Cordillera of Canada. Eighth Scientific Assembly, International Association of Geomagnetism and Aeronomy, Abstracts. Uppsala, Sweden, p. 74.
- Hart, C.J.R., Harris, M.J., Blackburn, W.H. and Symons, D.T.A., 1998. Depth of skarn formation as determined by Al-in-amphibole geobarometry, Whitehorse Copper Belt. Geological Association of Canada/MAC Program and Abstracts, vol. 23, Quebec City, p. A74.
- Hart, C.J.R., Johnston, S.T., Francis, D., Smuk, K., Wynne, P.J. and Enkin, R.J., 1998. Yellowstone in Yukon: a hotspot link to Late Cretaceous alkalic-associated Cu-Au mineralization. *In: Cordillera Revisited: Recent Developments in Cordilleran Geology, Tectonics and Mineral Deposits, Short Course Extended Abstracts, Exploration Methods '98-Pathways to Discovery, Geological Association of Canada, Cordilleran Section*, p. 110-117.
- Hart, C.J.R., Villeneuve, M. and Thorkelson, D.J., 1998. Geochronology and tectonic origin of Neogene alkalic volcanic rocks in the northern Canadian Cordillera. Geological Society of America Programs with Abstract, vol. 30, No. 7, p. A242.
- LeBarge, W.P., 1998. Placer deposit models in glaciated terrain: examples from ice marginal settings in central Yukon. *In: Main Results of the Study of the Quaternary Period and Principal Directions of Research in the XXI Century, Abstracts presented at the All-Russian Meeting of the Quaternary Investigations, St. Petersburg, Russia, September 14-19, 1998*, p. 302.
- LeBarge, W.P., 1997. Geological setting, production and exploration potential of Yukon placer gold deposits, *In: Major Geological and Commercial Types of Placers and Weathered Rock Mineral Deposits, Technology of Estimation and Development, Abstracts presented at the XIth Symposium on Mineral Deposits Associated with Placers and Weathered Rocks, Moscow, Russia, September 15-19, 1997*, p. 114.
- McCausland P.J.A., Symons, D.T.A. and Hart, C.J.R., 1998. Post-Cretaceous geotectonic motion of the Yukon-Tanana Terrane from paleomagnetism of the Seymour Creek stock, Yukon Territory. EOS, vol. 79, AGU Fall meeting, San Francisco. F219-F220.
- Murphy, D., 1998. Mafic and ultramafic plutonic rocks south of Finlayson Lake, Yukon: setting and implications for the early geological and metallogenic evolution of the Yukon-Tanana Terrane. Lithoprobe Report No. 64, p.120-129.
- Symons, D.T.A., Harris, M.J., Hart, C.J.R. and Blackburn, W.H., 1998. Geotectonics in the northern Cordillera from paleomagnetism and geobarometry: Progress report and recent results from the Eocene White Pass dikes and Jurassic Fourth of July batholith. Lithoprobe Report 64, p. 171-180.
- Symons, D.T.A., Harris, M.J., Blackburn, W.H. and Hart, C.J.R., 1997. Paleomagnetic and geobarometric study of the Teslin Crossing Stock, Stikine Terrane, Yukon, Canada. EOS, vol. 78, AGU Fall meeting, Abstracts and Program, San Francisco, p. F189.
- Symons, D.T.A., Harris, M.J., Hart, C.J.R. and Blackburn, W.H., 1998. Paleomagnetism of the Eocene White Pass dikes: End of northward translation for the accreted terranes inboard of the Cost shear zone. EOS, vol. 79, AGU Spring meeting, Boston, Mass., p. S63.
- Symons, D.T.A., Williams, P.R., Hart, C.J.R., 1998. Whence came the Yukon-Tanana Terrane?: Paleomagnetism of the Jurassic Big Creek Batholith, Y.T. EOS, vol. 79, AGU Fall meeting, San Francisco, p. F222.
- Thorkelson, D., J.G. Abbott, J. Mortenson, R. Creaser and M. Villeneuve, 1998. Proterozoic sedimentation, magmatism, metasomatism and deformation in the Wernecke and Ogilvie Mountains, Yukon. Lithoprobe Report No. 64, p. 110-119.

**GEOLOGICAL SURVEY OF CANADA
PUBLICATIONS WITH FUNDING FROM YGP**

- Open File D3685. National Geochemical Reconnaissance: Analytical data for Bi and Se in stream sediment samples from central Yukon (105M and 105N), by P.W. Friske, S.J.A. Day, C.C. Durham, M.W. McCurdy.
- Open File 3607. Airborne geophysical survey, Brewery Creek area, Yukon Territory (NTS 116B/1 and parts of 116A/4, 115P/13), by R.B.K. Shives, J.M. Carson and P.B. Holman, 218 p.

YUKON THESES COMPLETED IN 1998**B.Sc.**

Ryan, P.R., 1998. Measuring the geotectonic motion of the Yukon-Tanana Terrane. University of Windsor, Windsor, Ontario, 38 p.

Appel (née Meyer), V. 1998. Geological, geochronological and Pb isotopic constraints on the age and origin of the Mount Nansen epithermal Au-Ag vein deposit, Eastern Dawson Range, Yukon. University of British Columbia, 38 p.

M.Sc.

Driver, L., 1998. Petrogenesis of the Cretaceous Cassiar Batholith, Yukon-B.C., Canada: Implications for magmatism in the North American Cordilleran Interior. University of Alberta, 107 p.

Goodwin-Bell, J. S., 1997. A geochemical and Sm-Nd isotopic study of Cordilleran eclogites from the Yukon-Tanana Terrane. University of Alberta.

Kotler, E., 1998. The cryostratigraphic and isotopic characteristics of "muck" deposits, Klondike area, Yukon Territory. Carleton University, Ottawa, Ontario, 115 p.

Ph.D.

Harris, M., 1998. Geotectonic motions of northern Canadian Cordillera terranes from paleomagnetic measurements with geobarometric corrections. University of Western Ontario, London, Ontario, 206 p.

Mezger, J. E., 1997. Tectonometamorphic evolution of the Klwane metamorphic assemblage, SW Yukon: Evidence for Late Cretaceous eastward subduction of oceanic crust underneath North America. University of Alberta, 306 p.

YUKON PUBLICATIONS OF INTEREST

Burn, C.R., 1998. The response (1958-1997) of permafrost and near-surface ground temperatures to forest fire, Takhini River valley, southern Yukon Territory. *Canadian Journal of Earth Sciences*, vol. 35, p. 184-199.

Cecile, M.P., 1998. Geology and structure cross-section, Marmot Creek, Yukon Territory. Scale 1:50 000, latitude 63°45'-64°00', longitude 131°00'-131°30'. Geological Survey of Canada, Map 1923A.

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