

# YUKON GEOLOGY PROGRAM

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# Yukon Geology Program

**Grant Abbott**

*Yukon Geology Program*

Abbott, Grant. 1998. Yukon geology program. *In: Yukon Exploration & Geology 1997*; Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p.41-48.

The past year was a time of uncertainty, change and opportunity for the Yukon Geology Program (Fig. 1). The Program was established as a *de facto* Yukon Geological Survey in 1996 when the Canada/Yukon Mineral Development Agreement (MDA) ended. Under the Yukon Geology Program umbrella, two offices with different administrative structures are integrated and jointly managed (Fig. 2). These include federal funding through the Exploration and Geological Services Division of Indian and Northern Affairs Canada (DIAND) and territorial and cost-shared funding through the Mineral Resources Branch of the Department of Economic Development. The Geological Survey of Canada also maintains an office with the Program and other projects receive support and funding.

The main challenges in 1997 were to cope with personnel changes, restrictions on hiring, digital product development, conversion to publishing-on-demand, and increased demands from devolution, land claims and the Yukon Protected Areas Strategy. When the MDA ended, cost-shared geoscience funding was retained at previous levels, but only on a year-to-year basis. As a result, three geologist positions have remained vacant for more than two years, and a large portion of funding was directed towards geophysical surveys and compilation projects

rather than for geological mapping. Long-term support for geoscience is now more certain, and hiring began last spring and will continue in the new year. Grant Lowey is our new Placer Geologist and Ken Galambos replaces Grant Lowey as Mineral Development Geologist in charge of the Yukon Mining Incentive Program. The program suffered a big loss when our Chief Geologist, Trevor Bremner, moved on to become Acting Director of Mineral Resources, DIAND and shortly thereafter, to a position in Ottawa. In addition, Rod Hill, formerly Manager of Mineral Resources Branch, has become the devolution coordinator for the Yukon Territorial Government (YTG). Grant Abbott and Shirley Abercrombie are now acting in these key positions. Bob Holmes has moved from Senior Director of Mines and Resource Development, YTG to Director of Mineral Resources, DIAND, and Jesse Duke has taken over Bob's responsibilities in YTG. Terry Sewell, formerly Assistant Deputy Minister of Strategic Management and Industry Trade and Investment in YTG, has succeeded Mike Ivanski as Regional Director General of DIAND.

The Yukon Territorial Government and Indian and Northern Affairs Canada have entered into negotiations to devolve the responsibilities of the Northern Affairs Program. Devolution is likely, but not yet certain. If agreement is reached, transfer could take place as soon as the end of 1998, and a Yukon Geological Survey will become a reality.

The Yukon Geology Program in 1997 supported two mapping geologists, two placer geologists, one mineral deposit geologist, one resource assessment geologist, two staff geologists, and in part, one GSC regional mapper. Several other projects were also funded through contributions to the Geological Survey of Canada and to university researchers.

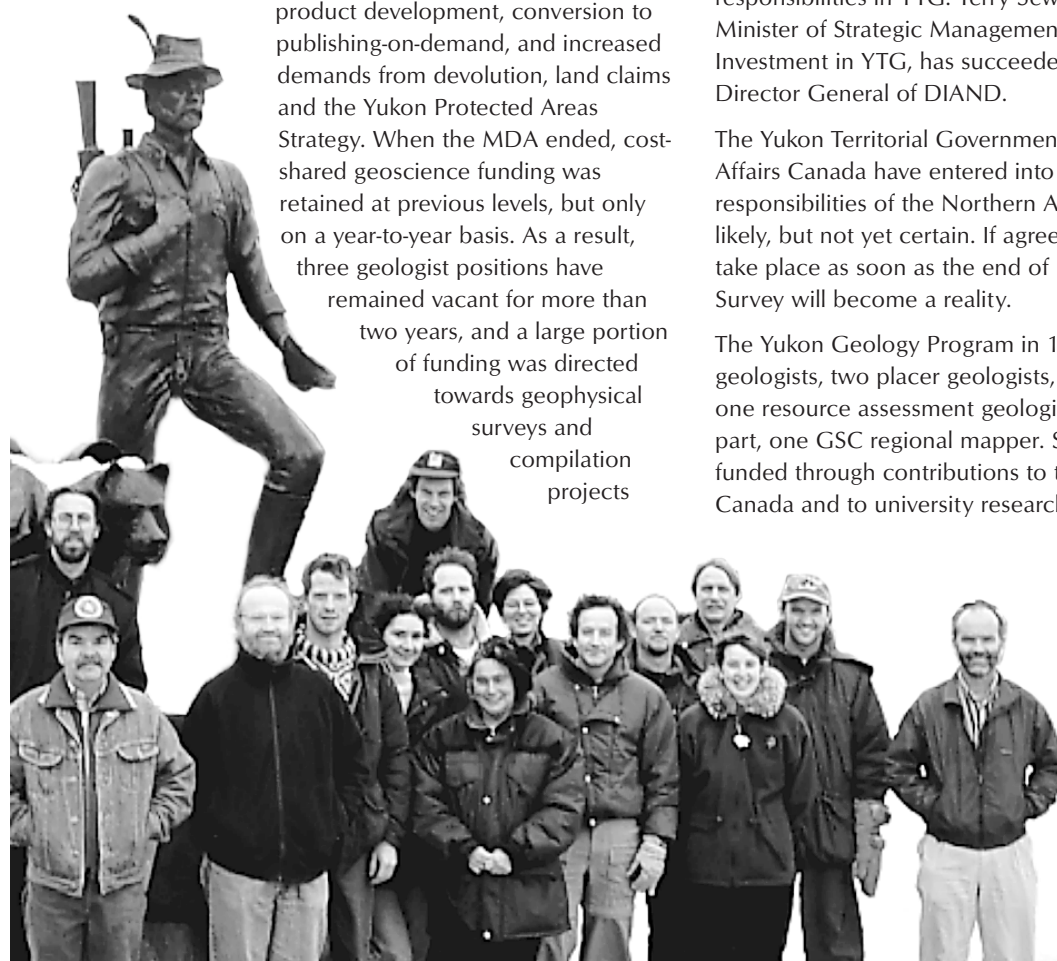


photo: N. Krockner

## Figure 1.

**TOP ROW, FROM LEFT:** Grant Lowey, the Prospector and his dog, Charlie Roots

**BOTTOM ROW, FROM LEFT:** Mark Nouvasad, Don Murphy, Will Van Randen, Julie Hunt, Mike Burke, Ali Wagner, Danièle Héon, Bill Lebarge, Craig Hart, Robert Deklerk, Shirley Abercrombie, Jeff Bond, Grant Abbott

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

Yukon Minfile, another mainstay of the Yukon Geology Program, is maintained by Robert Deklerk. We are undertaking a major software upgrade from Foxbase to Microsoft Access v.2 and have integrated the text base data file with the searchable database. Paper copies of the text version are still available through Exploration and Geological Services Division, and the digital version will be released on CD-ROM this spring and sold by IMS Information Management Services.

Placer deposit studies were a main focus of attention from the program. Bill Lebarge maintained contact with the placer industry and participated in the Mayo Placer Research Project: an ambitious multidisciplinary investigation of the surficial geology and setting of placer deposits of the Mayo District. Other key participants under contract are Jeff Bond, Leyla Weston and Tammy Allen. Fran Hein from the University of

Calgary also made significant contributions. The project is in its second and final year. A final report is expected this spring. Grant Lowey began a 1:100 000 scale compilation map of the geology of the White Channel gravel deposits in the Klondike district. Contractors S. Morison and C. Mougeot completed work on the Stewart River mapping project. Maps and an open file report will be released in the spring.

Julie Hunt, in the second year of her three-year study of volcanogenic massive sulphide (VMS) deposits, focused on the Fyre Lake, Wolverine, Ice, and Money deposits in the Finlayson Lake District. The diversity of ages and geologic settings of these deposits is demonstrated in her reports in this volume.

Craig Hart is in the second year of a three-year metallogenic study of the Dawson Range. He has not only the task of putting into their regional context the wide variety of intrusion-related precious and base-metal deposits, but is also compiling new 1:50 000 scale maps based on interpretation of geophysical surveys of the Dawson Range that were funded by the 1990-1996 Canada-Yukon Economic Development Agreement.

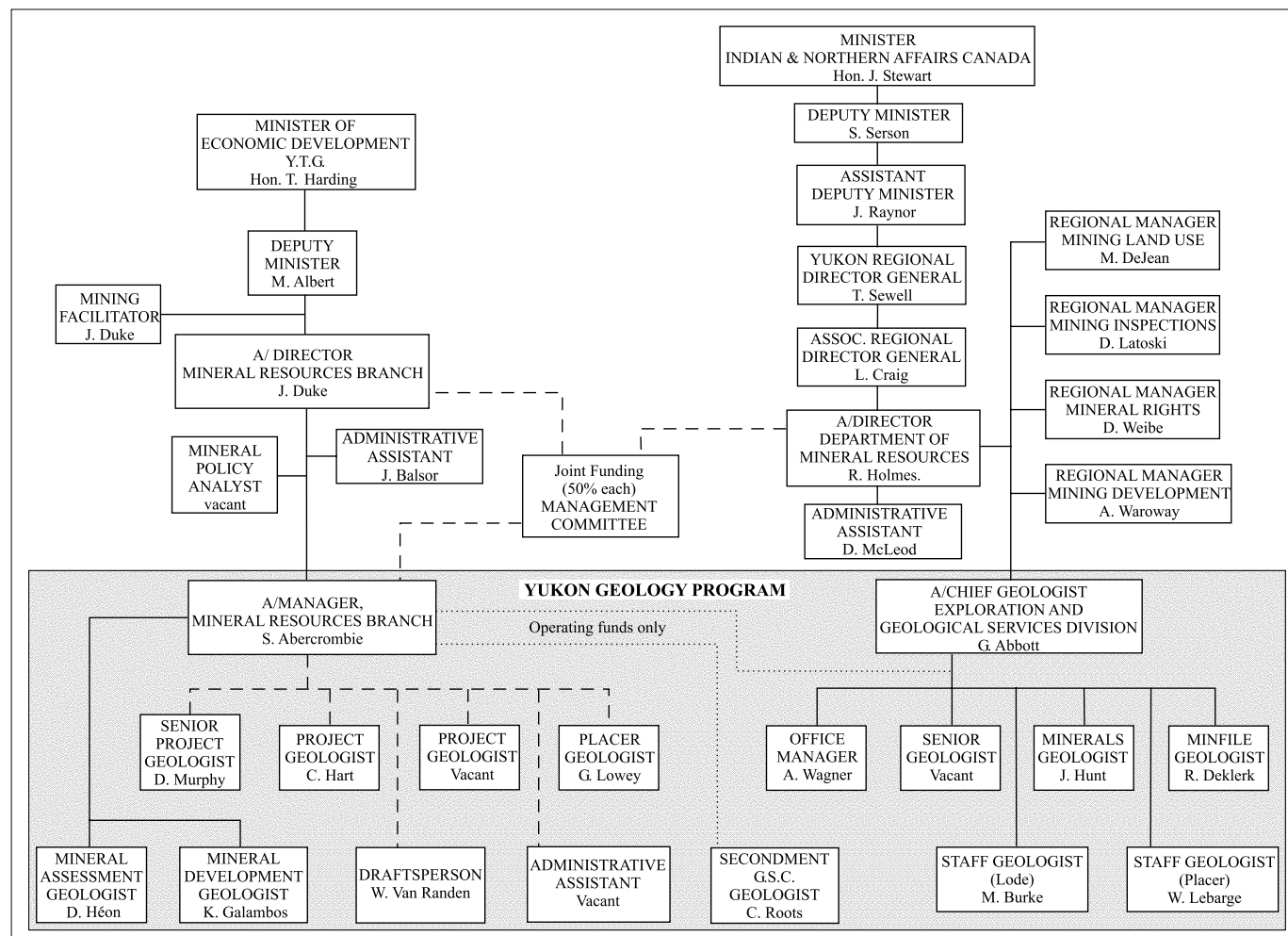
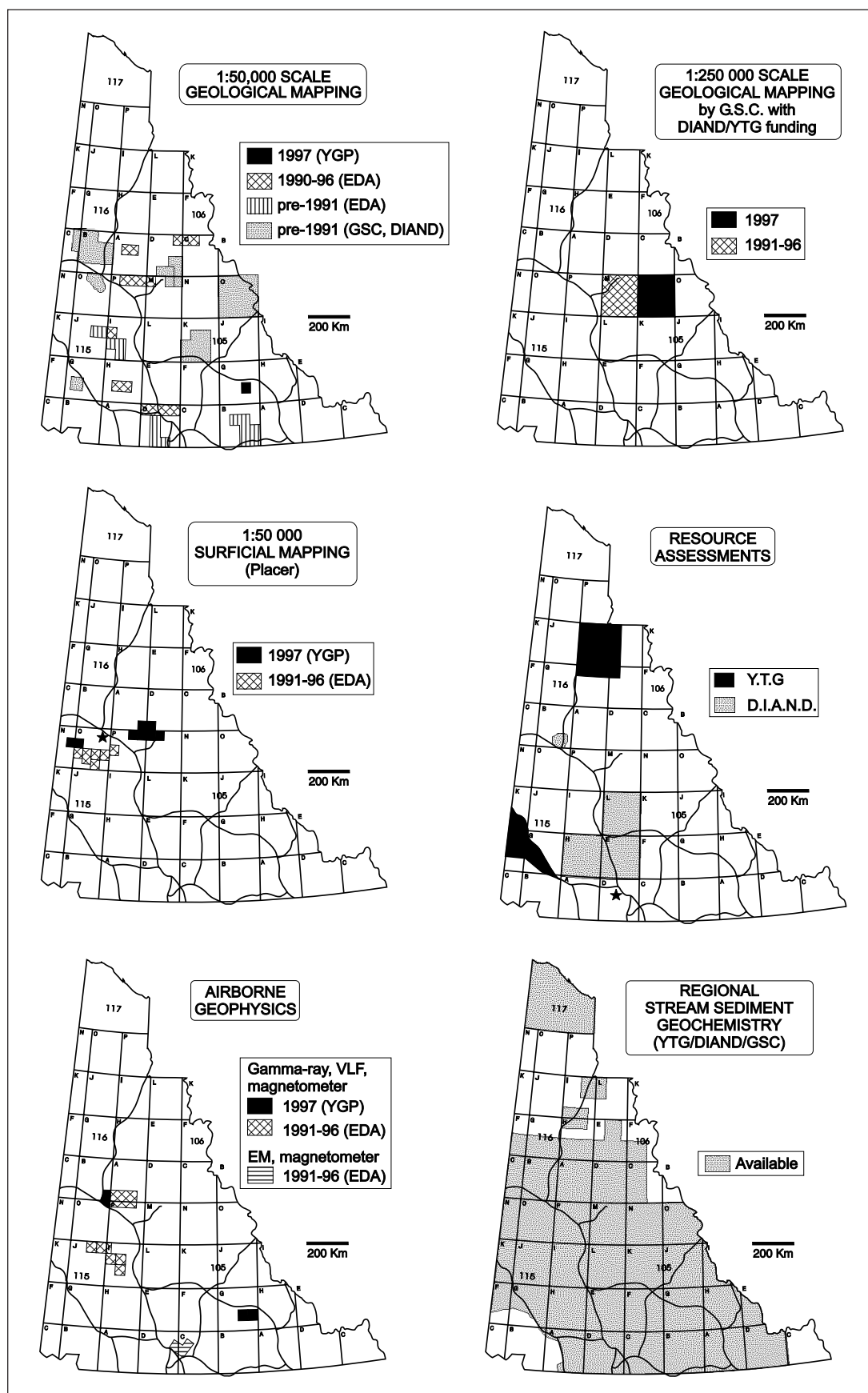


Figure 2. Yukon Mineral Resources organizational chart

**Figure 2.** Summary of available geological maps and regional geochemical and geophysical surveys in the Yukon. (Not shown are 1:250 000 scale geological maps and regional aeromagnetic maps, both of which cover most of the territory, published by the Geological Survey of Canada (GSC)).



Don Murphy completed his first 1:50 000 scale geological map in the Finlayson Lake area. His report in this volume demonstrates significant strides in understanding the stratigraphic setting of VMS deposits in this part of the Yukon-Tanana Terrane.

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. This year, Mineral Assessment Geologist, Danièle Héon, completed mineral potential studies for selected areas of the Eagle Plains and Richardson Mountains, and for the City of Whitehorse. However, the Yukon Protected Area Strategy will result in protection and withdrawal of areas in all 22 ecoregions in the Yukon. The Geology Program plans to provide efficient and cost-effective input into the selection process by undertaking a Regional Mineral Potential study for all of the Yukon in the spring of 1998.

The Yukon Geology Program supported the work of several scientists of the Geological Survey of Canada. Charlie Roots completed fieldwork in the Lansing map area and will now prepare the final report. This will be the completion of a seven-year long project to map the Mayo and Lansing map areas. This work fills a huge hole in the geological database of central Yukon. Rob Shives and Don Murphy supervised radiometric and magnetic surveys of one and three-quarters 1:50 000 scale map areas covering the Kudz Ze Kayah and Fyre Lake deposits in the Finlayson Lake area. The surveys will determine the geophysical signature of the deposits and their host rocks.

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 late 1998 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 Duc-Rodkin received support to produce a Glacial Limits map of the Yukon to mark the 100<sup>th</sup>

anniversary 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 placer potential in that area. The glacial limits map will be integrated with the digital bedrock compilation.

The Yukon Geology Program is converting to fully digital, on-demand publishing. All geological maps are now printed on-demand, and publications are being produced from a digital format. On-demand printing capability is expected from the Queen's Printer in the near future. This advance will greatly reduce our printing and storage costs. Within the next year, we expect to be able to sell digital files through our website.

Yukon Geology Program publications are published by Exploration and Geological Services Division (EGSD,) Yukon, Indian and Northern Affairs Canada, and are available through:

Geoscience Information and Sales  
Exploration and Geological Services Division, Yukon  
Indian and Northern Affairs Canada  
345-300 Main Street  
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To learn more about the Yukon Geology Program, visit our homepage at <http://www.yukonweb.com/government/geoscience/> or contact us directly:

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## APPENDIX 1: RECENT PUBLICATIONS

### BULLETINS

Bulletin 6: *Geology of the McQuesten River region, northern McQuesten and Mayo map areas, Yukon Territory (115P/14-16, 105M/13-14)*, by D.C. Murphy

Bulletin 7: *Geology of the Mayo map area, Yukon Territory (105M)*, by Charlie Roots

Bulletin 8: *A transect across northern Stikinia: geology of the northern Whitehorse map area, southern Yukon Territory (105D/13-16)*, by Craig J.R. Hart

Bulletin 9: *Geology of the Upper Hart River area, eastern Ogilvie Mountains, Yukon Territory (116A/10, 11)*, by Grant Abbott

### GEOSCIENCE MAPS

Geoscience Map 1996-1: Geological map of Clear Creek area, western Selwyn Basin, Yukon (115P/14) by D.C. Murphy, D. Héon, and J.A. Hunt (1:50 000-scale map accompanying EGSD Bulletin 6)

Geoscience Map 1996-2: Geological map of Sprague Creek area, western Selwyn Basin, Yukon (115P/15) by D.C. Murphy and D. Héon (1:50 000-scale map accompanying EGSD Bulletin 6)

Geoscience Map 1996-3: Geological map of Seattle Creek area, western Selwyn Basin, Yukon (115P/16) by D.C. Murphy and D. Héon (1:50 000-scale map accompanying EGSD Bulletin 6)

Geoscience Map 1996-4: Geological map of Mt. Haldane area, western Selwyn Basin, Yukon (115P/16) by J.A. Hunt, D.C. Murphy, C.F. Roots and W.H. Poole (1:50 000-scale map accompanying EGSD Bulletin 6)

Geoscience Map 1996-5: Geological map of Keno Hill area, Yukon (115P/16) by D.C. Murphy and C.F. Roots (1:50 000-scale map accompanying EGSD Bulletin 6)

Geoscience Map 1997-1: Bedrock geology of Mayo map area, central Yukon (NTS 105M) by C.F. Roots (Geological Survey of Canada) (1:250 000-scale map accompanying EGSD Bulletin 7)

Geoscience Map 1997-2: Geology of map area NTS 116A/10, eastern Ogilvie Mountains, Yukon by Grant Abbott (1:50 000-scale map accompanying EGSD Bulletin 9)

Geoscience Map 1997-3: Geology of Two Beaver Lake map area (NTS 116A/11), eastern Ogilvie Mountains, Yukon by Grant Abbott (1:50 000-scale map accompanying EGSD Bulletin 9)

Geoscience Map 1997-4: Geology of Thirty-seven Mile Creek map area, southern Yukon (NTS 105D/13) by Craig J.R. Hart (1:50 000-scale map accompanying EGSD Bulletin 8)

Geoscience Map 1997-5: Geology of Upper Laberge map area southern Yukon (NTS 105D/14) by Craig J.R. Hart (1:50 000-scale map accompanying EGSD Bulletin 8)

Geoscience Map 1997-6: Geology of Joe Mountain map area southern Yukon (NTS 105D/15) by Craig J.R. Hart and Julie A. Hunt (1:50 000-scale map accompanying EGSD Bulletin 8)

Geoscience Map 1997-7: Geology of Mount M'Clintock map area southern Yukon (NTS 105D/16) by Craig J.R. Hart and Julie A. Hunt (1:50 000-scale map accompanying EGSD Bulletin 8)

Geoscience Map 1997-8: Geology of Aishihik Lake map area, Yukon (NTS 115H/6) by Stephen Johnston and Jay Timmerman

Geoscience Map 1997-9: Geology of Hopkins Lake map area, Yukon (NTS 115H/7) by Stephen Johnston and Jay Timmerman

### MISCELLANEOUS

Yukon Quaternary Geology Vol. 2., W. Lebarge and C. Roots, ed.

Open File 1997-3. Preliminary geological map of Grass Lakes area, Pelly Mountains, southeastern Yukon (NTS 105G/7), by D.C. Murphy.

1997 Assessment Report Index, Mike Burke ed.

### OUTSIDE ARTICLES

Johnston, S.T., Mortensen, J.K. and Erdmer, P., 1996. "Igneous and metaigneous age constraints for the Aishihik metamorphic suite, southwest Yukon." *Canadian Journal of Earth Sciences*, v. 33, p. 1543-1555.

Harris, M.J., Symons, D.T.A., Blackburn, W.H., and Hart, C.J.R., 1997. "Paleomagnetic and geobarometric study of the mid-Cretaceous Whitehorse Pluton, Yukon Territory." *Canadian Journal of Earth Sciences*, v. 34, p. 1379-1391

Hart, C. J.R. and Orchard, M.J., 1996. "Middle Triassic (Ladinian) volcanic strata in southern Yukon, and their Cordilleran correlatives." *In: Current Research Part A, Geological Survey of Canada Paper 96-1A*.

Hunt, J.A., 1998. "Recent VMS discoveries in the Yukon." *Canadian Institute of Mining and Metallurgy, Bulletin*, February, 1998.

Johnston, S. T., Wynne, P.J., Francis, D., Hart, C.J.R., Enkin, R.J., and Engebretson, D.C., 1996. "Yellowstone in Yukon: The Late Cretaceous Carmacks Group." *Geology*, v. 27, No. 11, p. 997-1000.

Kwong, J.Y.T., Roots, C.F., Roach P., and Kettley, W., 1997. "Post-mine metal transport and attenuation in the Keno Hill mining district, central Yukon, Canada." *Environmental Geology* 30 (1/2), p. 98-107.

McMillan, W., John Thomson, J., Hart, C.J.R., and Johnston, S.T., 1996. "Porphyry deposits of the Canadian Cordillera." *In: Porphyry Deposits of the Northwestern Cordillera of North America*. Schroeter, T., ed., Canadian Institute of Mining, Metallurgy and Petroleum, Special Volume 46, p.40-57.

- Mustard, P. and Roots, C.F., 1997. "Rift-related volcanism, sedimentation and tectonic setting of the Mount Harper Group, Ogilvie Mountains, Yukon Territory." *Geological Survey of Canada, Bulletin* 492, 92 p.
- Poulsen, H.K., Mortensen J.K., and Murphy, D.C., 1997. "Styles of intrusion-related gold mineralization in the Dawson-Mayo area, Yukon Territory." In: *Current Research 1997-A, Geological Survey of Canada*, p. 1-10.
- Rainbird, R. H., McNicoll V. J., Theriault, R. J., Heaman, L. M., Abbott, J.G., Long, D.G.F., and Thorkelson, D. J., 1997. "Pan-continental river system draining Grenville orogen recorded by U-Pb and Sm-Nd geochronology of Neoproterozoic quartzites and mudrocks, northwestern Canada." *Journal of Geology*, v.105, p.1-17.
- Strujkov, S.F., Ryjov, O.B., Aristov, V.V., Grygoriev, N.V., Radchenko, Yu.I., Kolesnikov, A.G., and Abbott, J.G., 1996. "Geological Structure and Ore Mineralogy of the Jullietta Gold-Silver Deposit, Northeast Russia." *International Geology Review*, v. 38, p.625-648.

## ABSTRACTS

- Abbott, G., Thorkelson, D., Creaser, R., Bevier, M.L., and Mortensen, J., 1997. "New correlations among Proterozoic successions and intrusive breccias in the Ogilvie and Wernecke Mountains, Yukon." *Lithoprobe Report* No. 56, p.188-197.
- Enkin, R. J., Wynne, P. J., Baker, J.D., Johnston, S.T., Francis, D., Hart, C.J.R., and Engebretson, D.C., 1997. "Yellowstone in the Yukon- A multidisciplinary approach to a paleogeographic problem." *Geological Association of Canada Program with Abstracts*, p. A47.
- Goldfarb, R.J., Landefeld, L.A., and Hart, C.J.R., 1996. "Overview of the goldfields in metamorphic rocks of the North American Cordillera." In: *Mesothermal Gold Deposits: A Global Overview. Short Course Extended Abstracts*, University of Western Australia, Publication No. 27, p. 58-65.
- Harris, M.J., Symons, D.T.A., Blackburn, W.H., and Hart, C.J.R., 1997. "Geotectonic motion of the northern Intermontane Superterrane: Paleomagnetic measurements with geobarometry of the Mount McIntyre Pluton, Yukon Territory." *Geological Association of Canada Program with Abstracts*, p. A65.
- Harris, M.J., Symons, D.T.A., and J.R. Hart, C.J.R., 1997. "A test for Laramide remagnetization in the Intermontane of the Yukon Territory." *Geological Association of Canada Program with Abstracts*, p. A65.
- Harris, M.J., Symons, D.T.A., Blackburn W.H., and Hart, C.J.R., 1996. "Geotectonic displacement of the Stikine Terrane: Evidence from the Paleomagnetic measurements on the Whitehorse Pluton, Yukon Territory." *American Geophysical Union, Spring Meeting, Abstracts and Program*, p. S90.
- Harris, M.J., Symons, D.T.A., Blackburn W.H. and Hart, C.J.R., 1996. "Paleomagnetic determinations of the geotectonic displacement of the northern Intermontane, Yukon: Progress report and preliminary results from the Whitehorse Pluton." *Lithoprobe Report* No. 50, p. 118-131.
- Hunt, J.A., 1998. "VMS Exploration in the Yukon-Tanana Terrane." *Extended Abstracts, Pathways '98*, Vancouver.
- Roots, C.F., 1997. "Fault Geometry in Lansing map area, central Yukon: Progress report." *Lithoprobe Report* #56, p.244.
- Symons, D.T.A. Harris, M.J., Blackburn, W.H., and Hart, C.J.R., 1997. "Paleomagnetic determination of the geotectonic displacement of the northern Intermontane belt: Progress report and recent results." *Lithoprobe Report* No. 56, p. 77-86.

## YUKON PUBLICATIONS OF INTEREST

- Creaser, R.A., Heaman, L.H., and Erdmer, P., 1997. "Timing of high-pressure metamorphism in the Yukon-Tanana terrane, Canadian Cordillera: constraints from U-Pb zircon dating of eclogite from the Teslin tectonic zone." *Canadian Journal of Earth Sciences* v. 34, p. 709-715.
- Creaser, R.A., Erdmer, P., Stevens, R.A., and Grant, S.L., 1997. "Tectonic affinity of Nisutlin and Anvil assemblage strata from the Teslin tectonic zone, northern Canadian Cordillera: Constraints from neodymium isotope and geochemical evidence." *Tectonics* v. 16, p. 107-121.
- Fraser, T.A. and Burn, C.R., 1997. "On the nature of 'muck' deposits in the Klondike area, Yukon Territory." *Canadian Journal of Earth Sciences*, v. 34, p. 1333-1344.
- Hulbert, L.J., 1997. "Geology and metallogeny of the Kluane mafic-ultramafic belt, Yukon Territory, Canada: eastern Wrangellia - a new Ni-Cu-PGE metallogenic terrane." *Geological Survey of Canada, Bulletin* 506, 265 p..
- Norris, D.K. (ed.) 1997. "Geology and Mineral and Hydrocarbon potential of the northern Yukon Territory and northwestern District of Mackenzie." *Geological Survey of Canada, Bulletin* 422. 401p. (1:250 000 scale maps for this region were published in 1981-2; Geological Survey of Canada, Maps 1514A-1526A)
- Park, J.K., 1997. "Paleomagnetic evidence for low-latitude glaciation during deposition of the Neoproterozoic Rapitan Group, Mackenzie Mountains, Northwest Territories, Canada." *Canadian Journal of Earth Sciences*, 34, p. 34-49.
- Plint, H.E., and Gordon, T.M., 1997. "The Slide Mountain Terrane and the structural evolution of the Finlayson Lake Fault Zone, southeastern Yukon." *Canadian Journal of Earth Sciences*, v.34, p.105-126.



## APPENDIX 2: GEOSCIENCE RESEARCH IN THE YUKON, 1997

- Geochemical and Sm-Nd isotope systematics of Yukon-Tanana terrane eclogites. *Robert A. Creaser, Philippe Erdmer and J. Goodwin-Bell* (University of Alberta).
- Geochemical and Nd isotopic constraints for the origin of the Dorsey terrane. *Robert A. Creaser* (University of Alberta) and *Tekla Harms* (Amherst College).
- Nd-Sr-Pb, U-Pb and geochemical systematics of the Mississippian Simpson Range Plutonic Suite, Money Klippe, Yukon-Tanana terrane. *Robert A. Creaser, Philippe Erdmer and Steve Grant* (University of Alberta).
- Geochemical and Nd isotope constraints for the origin of major temporal changes in miogeoclinal sedimentary rock record, Selwyn Basin. *Robert A. Creaser and Philippe Erdmer* (University of Alberta).
- Petrogenesis of Eocene plutonic rocks, Skukum and Bennett Lake areas. *Robert A. Creaser and George Morris* (University of Alberta).
- The structure and tectonic significance of the Teslin zone, south-central Yukon. *Martin de Keijzer and Paul Williams* (University of New Brunswick).
- Tectonic significance of the Teslin Zone, Yukon. *Richard Brown, Sharon Carr and Chris Gallagher* (Carleton University).
- U-Pb geochronology studies: Timing constraints on deformation and thermal history of the Teslin Zone. *Sharon Carr* (Carleton University).
- Geotectonics of the Allochthonous Terranes of the Northern Cordillera from paleomagnetic and geobarometric studies: Yukon-Tanana Terrane. *David T.A. Symons* (University of Windsor), *William H. Blackburn* (University of Western Ontario) and *Craig J.R. Hart* (Yukon Geology Program).
- The structural and metamorphic history of the St. Cyr klippe, south-central Yukon: implications for terrane associations and terrane assembly in the Northern Canadian Cordillera. *Karen M. Fallas and Philippe Erdmer* (University of Alberta).
- Sedimentology and stratigraphy of Haggart Creek Placer Deposits in the Mayo Mining District, central Yukon Territory. *Leyla Weston* (University of Calgary).
- Carmacks-aged, gold-rich polymetallic vein mineralization in the Dawson range, west-central Yukon. *Katherine Smuk, A.E. Williams-Jones and Don Francis* (McGill University).
- Xenolith studies of the lithospheric mantle beneath the Yukon. *Don Francis, Anne Pelsier and Shi Lang* (McGill University).
- Geochemical signature of the shoshonitic Carmacks Group volcanics, Yukon. *Don Francis* (McGill University).
- Geochemistry and isotopes of recent alkaline basalts in the Northern Cordillera. *Don Francis and Anne-Claude Abraham* (McGill University).
- Geochemistry of the Sloko-Skukum volcanic event in the Northern Cordillera. *Don Francis* (McGill University).
- Geology and geochronology of the Yukon-Tanana Terrane in western Yukon and eastern Alaska. *James K. Mortensen* (University of British Columbia).
- Geochronology of the Yukon-Tanana Terrane in southeastern Yukon. *James K. Mortensen* (University of British Columbia) and *D.C. Murphy* (Yukon Geology Program).
- Geochronology and geochemistry of intrusive rocks of the Tombstone and Tungsten plutonic suites. *James K. Mortensen, James Lang, Timothy Baker* (University of British Columbia) and *D.C. Murphy* (Yukon Geology Program).
- Fluid chemistry of intrusion-related mineralization associated with the mid-Cretaceous Tombstone Plutonic Suite. *Timothy Baker, James Lang and James K. Mortensen* (University of British Columbia).
- Geology and geochemistry of the Dublin Gulch intrusion-hosted gold deposit, central Yukon. *Terri Maloof and John F.H. Thompson* (University of British Columbia).
- Petrology, geochemistry and physical properties of the Emerald Lake intrusion, Tombstone Plutonic Suite, east-central Yukon. *R. Duncan and J. Kelly Russell* (University of British Columbia).
- Evolution of Cretaceous magmatism in Yukon Territory. *James K. Mortensen* (University of British Columbia), *D.C. Murphy* (Yukon Geology Program), *Robert G. Anderson* and *Steve P. Gordey* (Geological Survey of Canada-Vancouver).
- Geochronology and Pb isotope geochemistry of plutonic and metaplutonic rocks associated with the Minto and Williams Creek copper porphyry(?) deposits, west-central Yukon. *James K. Mortensen* (University of British Columbia).
- Age and Pb isotopic geochemistry of SEDEX and VMS base metal deposits in the Yukon-Tanana Terrane, Yukon and east-central Alaska. *James K. Mortensen* (University of British Columbia).
- Age and origin of Meso- and Neoproterozoic magmatism in the Wernecke and Ogilvie Mountains, Yukon. *James K. Mortensen* (University of British Columbia), *Derek J. Thorkelson* (Simon Fraser University) and *J. Grant Abbott* (Yukon Geology Program).
- U-Pb age constraints on possible southern extensions of the Yukon-Tanana Terrane east of Teslin Lake, southern Yukon and northern British Columbia. *Richard M. Friedman and James K. Mortensen* (University of British Columbia), *JoAnne Nelson* and *Mitch G. Mihalnyuk* (B.C. Geological Survey Branch).
- Age and evolution of igneous and sedimentary rocks in and adjacent to the Tintina Trench: implications for the nature and offset history of the Tintina Fault Zone. *James K. Mortensen* (University of British Columbia).

Nature and origin of westerly derived Upper Triassic sedimentary rocks along the western margin of North America in southeastern Yukon and implications for the earliest stages of terrane accretion in the northern Cordillera. *James K. Mortensen* (University of British Columbia), *Phillipe Erdmer* (University of Alberta) and *Edward Ghent* (University of Calgary).

U-Pb geochronology of the Flex Zone, Mount Nansen area, Yukon. *Vikki Meyer* and *James K. Mortensen* (University of British Columbia).

U-Pb geochronology of mid-Paleozoic plutonic rocks in the northern Yukon. *James K. Mortensen* (University of British Columbia) and *Larry S. Lane* (Geological Survey of Canada-Calgary).

Geology and origin of the Ketza River gold deposit, east-central Yukon. *Ana Fonseca* and *James K. Mortensen* (University of British Columbia).

Structural controls on gold mineralization at the Brewery Creek gold deposit. *C. Germain* and *James K. Mortensen* (University of British Columbia).

Deformation processes along the Denali Fault System. *Joseph C. White* (University of New Brunswick).

Geochronology of Dawson Range mineral deposits. *Mike Villeneuve* (Geological Survey of Canada-Ottawa) and *Craig J.R. Hart* (Yukon Geology Program).

### RECENTLY COMPLETED YUKON GEOSCIENCE THESES

Evidence for two magmas within the Eocene Sloko-Skukum volcanics. *Eric Galbraith*, Unpublished B.Sc. thesis, McGill University, Montreal, 1997.

Late Cenozoic history of McQuesten map area (115P), Yukon Territory. *Jeff D. Bond*, Unpublished M.Sc thesis, University of Alberta, 161 p. 1997.

Geochemical, radiogenic tracer isotopic and U-Pb geochronological studies of Yukon-Tanana Terrane rocks from the Money Klippe, southeastern Yukon, Canada. *Steven L. Grant*, Unpublished M.Sc thesis, University of Alberta, 177 p. 1997.