

## **Association of Applied Geochemists**

### www.appliedgeochemists.org

#### RECENT ARTICLE PUBLISHED IN EXPLORE

The following is an abstract for an article that appeared in issue 173 of *Explore Newsletter*.

# "Amalgamated Lake-Sediment Data from Quebec and Labrador, Canada"

Stephen Amor<sup>1</sup>, Martin McCurdy<sup>2</sup>, Robert Garrett<sup>2</sup>, David Corrigan<sup>2</sup> and Fabien Solgadi<sup>3</sup>

Combination of lake-sediment geochemical results from Labrador and northeastern Québec is complicated by the differing analytical protocols applied in the two regions. While the Québec samples were digested with aqua regia prior to analysis, certain elements in the Labrador samples had previously only been analyzed either after a near-total digestion or by the total-element method of neutron-activation. In order to create a more harmonious regional data set, 5,510 Labrador samples were re-analyzed after aqua regia digestion.

Rocks of the Labrador Trough (New Québec Orogen) have given rise to the most extensive and distinctive patterns, particularly of chalcophile and siderophile elements. For some (e.g. Cu and Pb), the most strongly elevated values extend only 300 km from 54° 45' N to about 57° 30' N, whereas the highest values of As and Sb define a curvilinear feature that extends over the trough's entire 600 km strike length (Fig. 1). The well-documented glacial dispersion train associated with the Strange Lake/Lac Brisson rare earth element and rare metal deposit is also defined by elements such as Sn, and appears to extend at least 25 km westwards into Quebec. The distribution of S closely follows that of loss-on-ignition (LOI), and, in Labrador and the adjacent part of Québec, S values fall sharply at approximately latitude 57°N. Further west, however, elevated S and LOI values persist as far north as Ungava Bay in the catchment basin of the Koksoak River. This work has been successful in eliminating the discontinuity at the provincial border for most elements and in creating lucid geochemical maps covering an area of 300,000 km<sup>2</sup>.

The full article can be viewed at: www.appliedgeochemists.org/index.php/publications/explore-newsletter

#### PROPOSED SESSIONS FOR RFG2018

The Association for Applied Geochemists has proposed 14 sessions for the Resources for Future Generations 2018 conference (RFG2018), which will be held 16–21 June 2018 in Vancouver (Canada) (see www.rfg2018. org). Anyone interested in participating in the sessions should contact the AAG organising committee chair, Peter Winterburn (pwinterburn@eos.ubc.ca), who will direct you to the appropriate session chairs. The organising committee is also open to further suggestions for additional sessions, as well as proposals for workshops and field trips to be run in association with RFG2018. Please note that the deadline for session proposals is 1 May 2017.

- "Exploration Undercover Techniques, Technology and Strategy"
- "Big-Data: Integration, Management and Regional Scale Surveys"
- 1 Geological Survey of Newfoundland and Labrador P.O. Box 8700, St. John's NL, Canada A1B 4J6 e-mail: stephenamor@gov.nl.ca
- 2 Natural Resources Canada, Geological Survey of Canada 601 Booth Street, Ottawa ON, Canada K1A 0E8
- 3 Ministère de l'Énergie et des Ressources naturelles Direction générale de géologie Québec 400, boul. Lamaque, bureau 1.02 Val-d'Or QC, Canada J9P 3L4

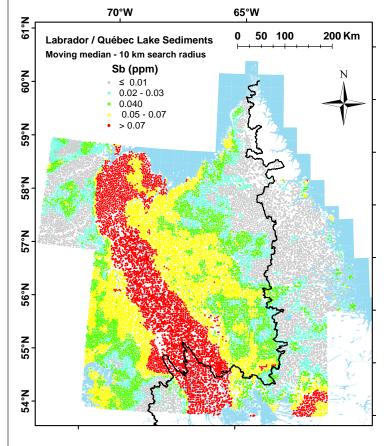


FIGURE 1 Distribution of Sb (unweighted moving medians) in Labrador and northeast Quebec lake sediments.

- "Footprints of Giant Orebodies Mineralogical, Spectral and Geochemical"
- "Mineral Exploration in Extreme Environments"
- "Hydrogeochemistry: Environment and Exploration"
- "Acid Rock Drainage in Mining and Civil Construction"
- "Analytical Technology in the Search for Minerals: Space to the Lab to the Field"
- "Macro- to Micro-Biogeochemistry: Exploration, Processing, Remediation and the Environment"
- "Hydrocarbons in the Exploration for Metalliferous and Non-Metalliferous Deposits"
- "Stable and Radiogenic Isotope Systems: Applications in Exploration and the Environment"
- "Economic Redevelopment of Brownfields: New Uses for Old Mines"
- "Groundwater and Mineral Resources"
- "Geometallurgy: Exploration-Evaluation-Exploitation-Environment"
- "Exploration Case Studies Out of the Box Concepts, Methodologies, and Practices"