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NEW GEOCHEMISTRY DATA FOR LAKE-BOTTOM SEDIMENTS IN THE MINGANIE AND BASSE-COTE-NORD AREAS

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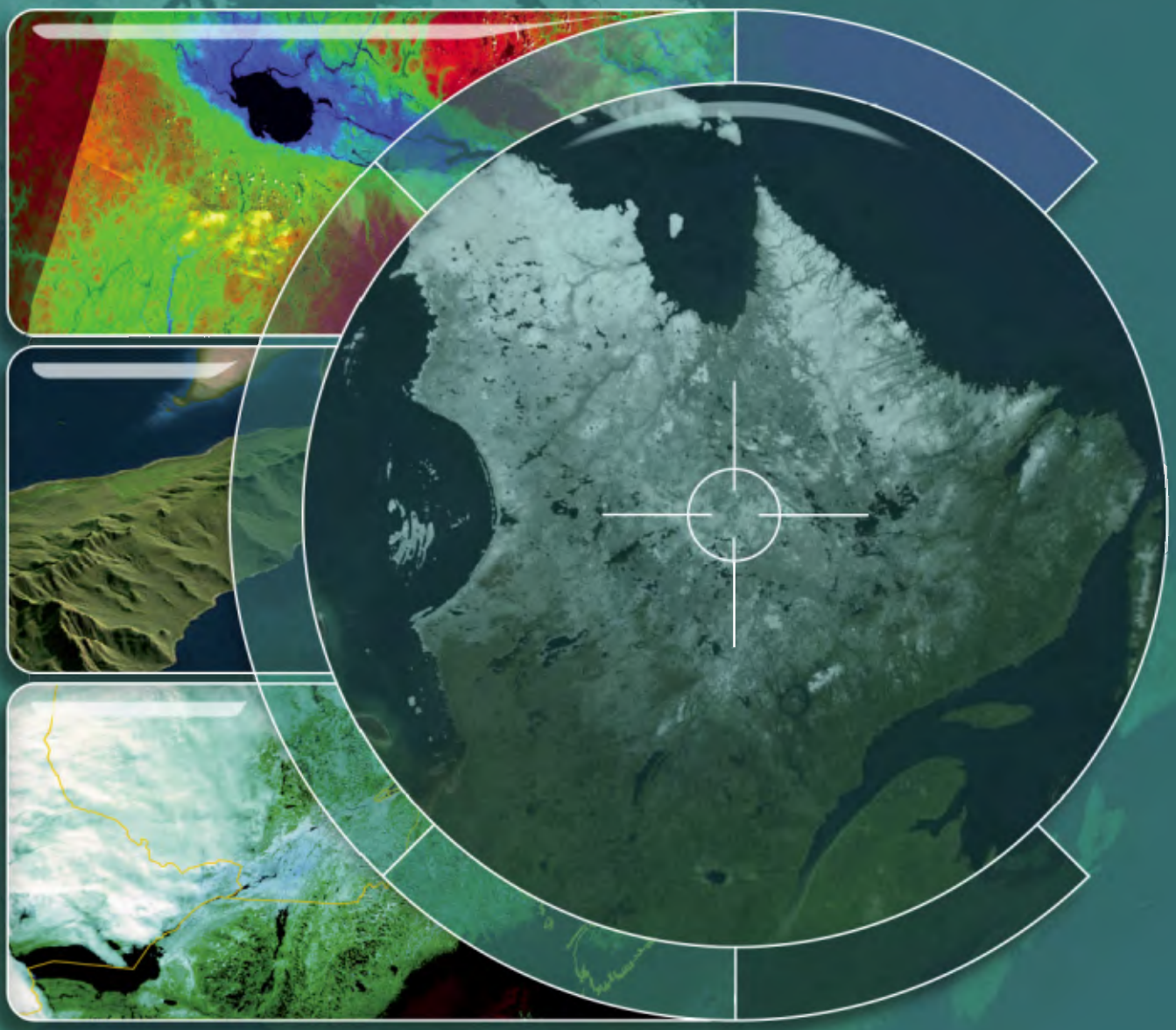

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New Geochemistry Data for Lake-Bottom Sediments in the Minganie and Basse-Côte-Nord Areas

Eric Hurtubise (CPDM), Sarah-Jeanne Morin (CPDM) and Jean-Yves Labbé (MRNF)

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Introduction

The Ministère des Ressources naturelles et de la Faune du Québec (MRNF), with the cooperation of the Corporation de promotion du développement minéral de la Côte-Nord (CPDM), announces the publication of new geochemistry data for lake-bottom sediments in the Minganie and Basse-Côte-Nord areas (Figure 1). These data are now available in SIGEOM, at the following address: http://sigeom.mrnf.gouv.qc.ca/signet/classes/I1102_indexAccueil?l=a under the tab "Geochemistry – Sediment sample". A utility software (TranspoSedSIG) that can be used to convert SIGEOM data into an easy-to-use table format is available for our customers. This tool is provided in Access 97 or Access 2002 format at the following address: http://www.mrnf.gouv.qc.ca/english/mines/geology/geology-databases.jsp.

The geochemistry data is derived from new analyses of samples collected in the 1980s by the MRNF, in three different regional surveys.

This project is the very first example of the type of collaborative effort that may come out of the specific 3-year agreement (in effect since April 1, 2008) concluded between the MRNF and the Ministère du Développement économique, de l'Innovation et de l'Exportation, the Ministère de l'Emploi et de la Solidarité sociale, the Ministère des Affaires municipales et des Régions, the Conférence régionale des élus de la Côte-Nord, Hydro-Québec, the regional ACCORD committee, and finally, the CPDM who is the principal agent. The ultimate goal of this agreement, aimed at developing regional expertise in the acquisition of secondary environment geochemistry data, as well as promoting and developing the mineral industry of the Côte-Nord region, is to stimulate investments in mineral exploration in the Côte-Nord region specifically.

Project Description and Methodology

The new data covers the Minganie and Basse-Côte-Nord regional county municipalities (MRC), for a total surface area of more than 103,000 km^2. The project is based on three previous surveys, namely: the Minganie survey conducted in 1988, the Baie-Johan-Beetz survey of 1983, and the Basse-Côte-Nord survey conducted in 1989. The general sample density was of 1 sample per 13 km^2, except for the Baie-Johan-Beetz survey and part of the Minganie survey, where greater mineral potential warranted a closer sample spacing of 1 sample per 2.5 km^2 (Figure 1). A total of 11,286 samples were thus re-analyzed within the scope of this new project.

The area north of Havre-Saint-Pierre could not be covered, since the samples were not available. These samples have already been re-analyzed, specifically for titanium detection by QIT, under an agreement with the MRNF.

Samples were analyzed at AcmeLabs facilities in Vancouver. A total of 53 elements were analyzed by inductively coupled plasma mass spectrometry (ICP-MS) following aqua regia digestion. The results are illustrated on various maps provided in this report, which were created using the "grid" option for the "Create thematic map" function in MapInfo version 9.5. The maps were generated using the inverse distance squared interpolation method, based on a search radius of 6 km and square cells of 300 m x 300 m. For each element, grades were grouped based on percentile ranges, namely from 0 to 80, 80 to 90, 90 to 95, 95 to 98, 98 to 99, and 99 to 100.

Areas of Interest

The results clearly outline areas of potential interest for exploration. Of course, any number of elements could have been discussed at this time. However, since the purpose of this publication is to rapidly release this new data, we chose to illustrate only the ten most significant elements, namely Au, As, Cu, La, Mo, Nb, Ni, Pt, Th, and U.

The gold map shows an important anomaly centred on the Wakeham Terrane (Figure 2). Two parallel anomalies trending north-south are clearly visible. This geological zone has long been recognized for its polymetallic and gold occurrences. A strong arsenic anomaly is also present in this area, slightly offset relative to the gold anomaly.

For Ni, Cu, and Pt (Figure 3), anomaly zones are visible on each map, but are not necessarily correlated. For Ni and Cu, anomalies are mainly concentrated in the west part of the map area, where they are most likely associated with mafic rocks in the Lac-à-L'Aigle Domain and the Saint-Jean Domain. As for Pt, a clearly defined anomaly appears in the northwest part of the map area. This anomaly may also be related to rocks of the latter geological domains.

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www.mrnf.gouv.qc.ca/english/products-services/mines.jsp
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The uranium map shows an extensive anomalous domain, from the centre of the area following an arcuate signature toward the east (Figure 4). This area corresponds to the Mecatina anorthositic Suite. In the west part of the map, another anomaly is also visible and coincides with anomalies in copper, lanthanum, and niobium. The latter may indicate the presence of Fe oxide-type mineralization. The thorium map shows no positive correlations with uranium, which makes the uranium anomalies that much more interesting in terms of ore deposit models.

In the case of molybdenum, the results suggest the presence of several small anomaly zones (Figure 5), some of which are associated with uranium. In fact, the arcuate signature corresponding to the Mecatina anorthositic Suite is also visible on the molybdenum map.

An extensive Nb anomaly is clearly visible in the centre of the map area (Figure 5). It is probably associated with the west part of the Wakeham Terrane. In the east part of the map, along the Saint Lawrence River, a smaller anomaly is visible, associated with the Baie-des-Moutons syenite.

Finally, for rare earth elements, which are represented here by lanthanum, well-defined anomalies are outlined (Figure 5). Some of these appear to be associated with uranium anomalies, while another is correlated with niobium, in the vicinity of the Baie-des-Moutons syenite.

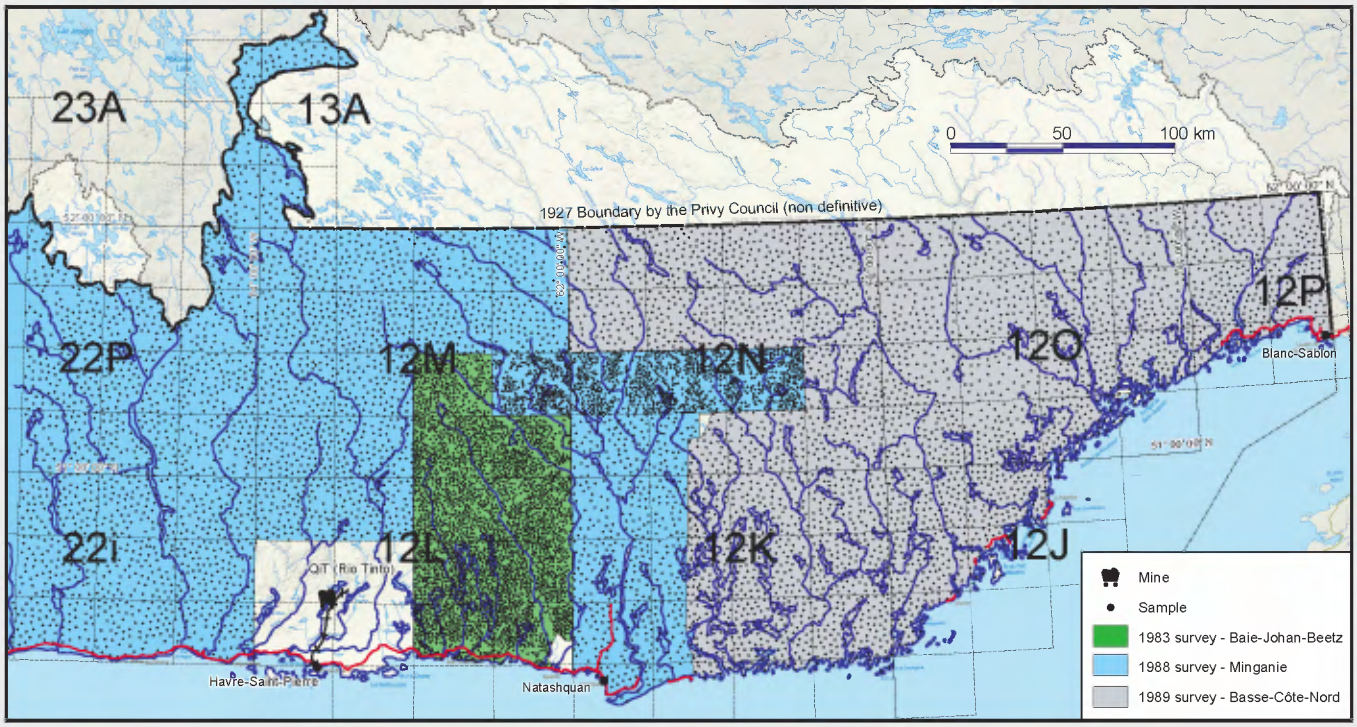

Figure 1 - Location map.

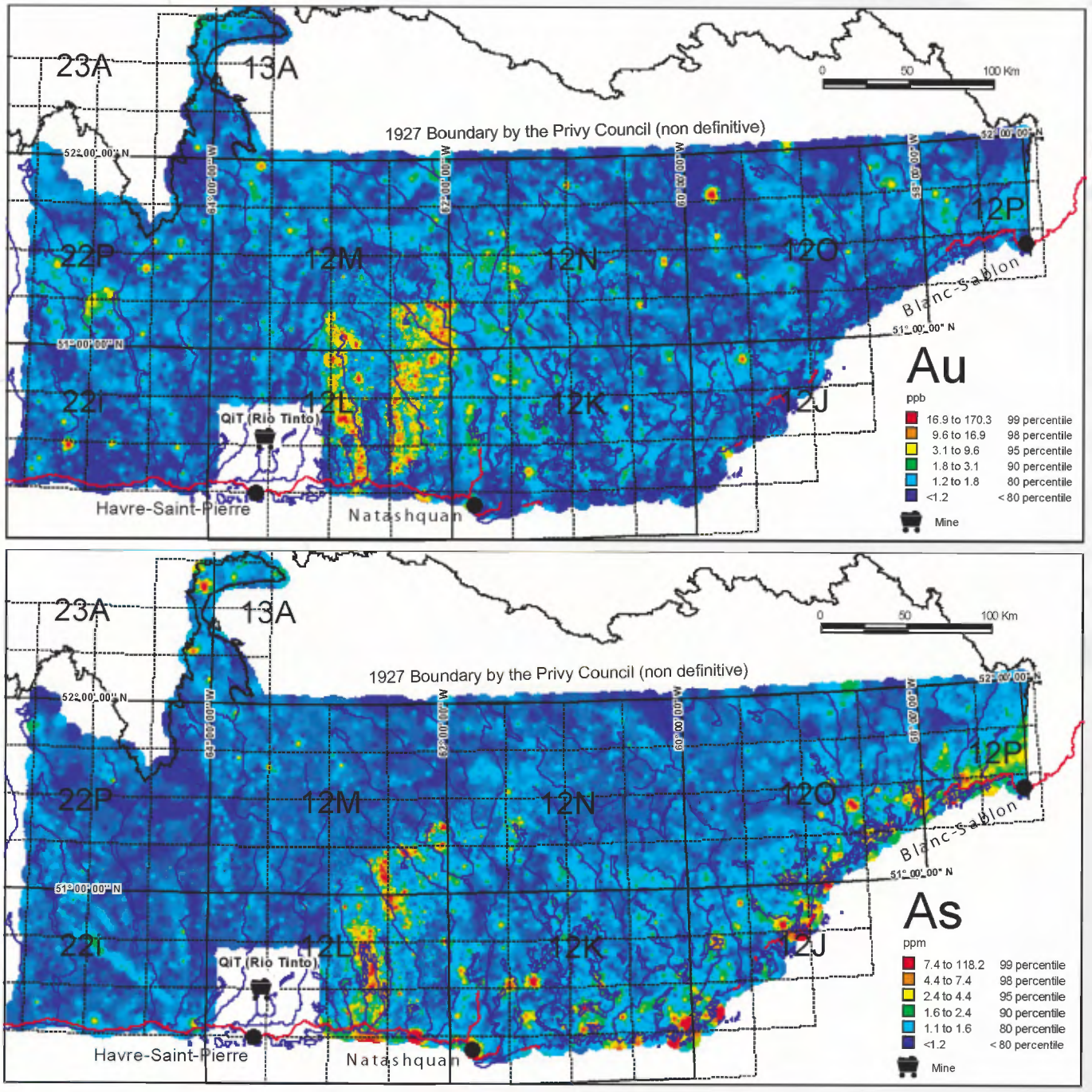

Figure 2 - Maps showing gold and arsenic anomalies in lake-bottom sediments.

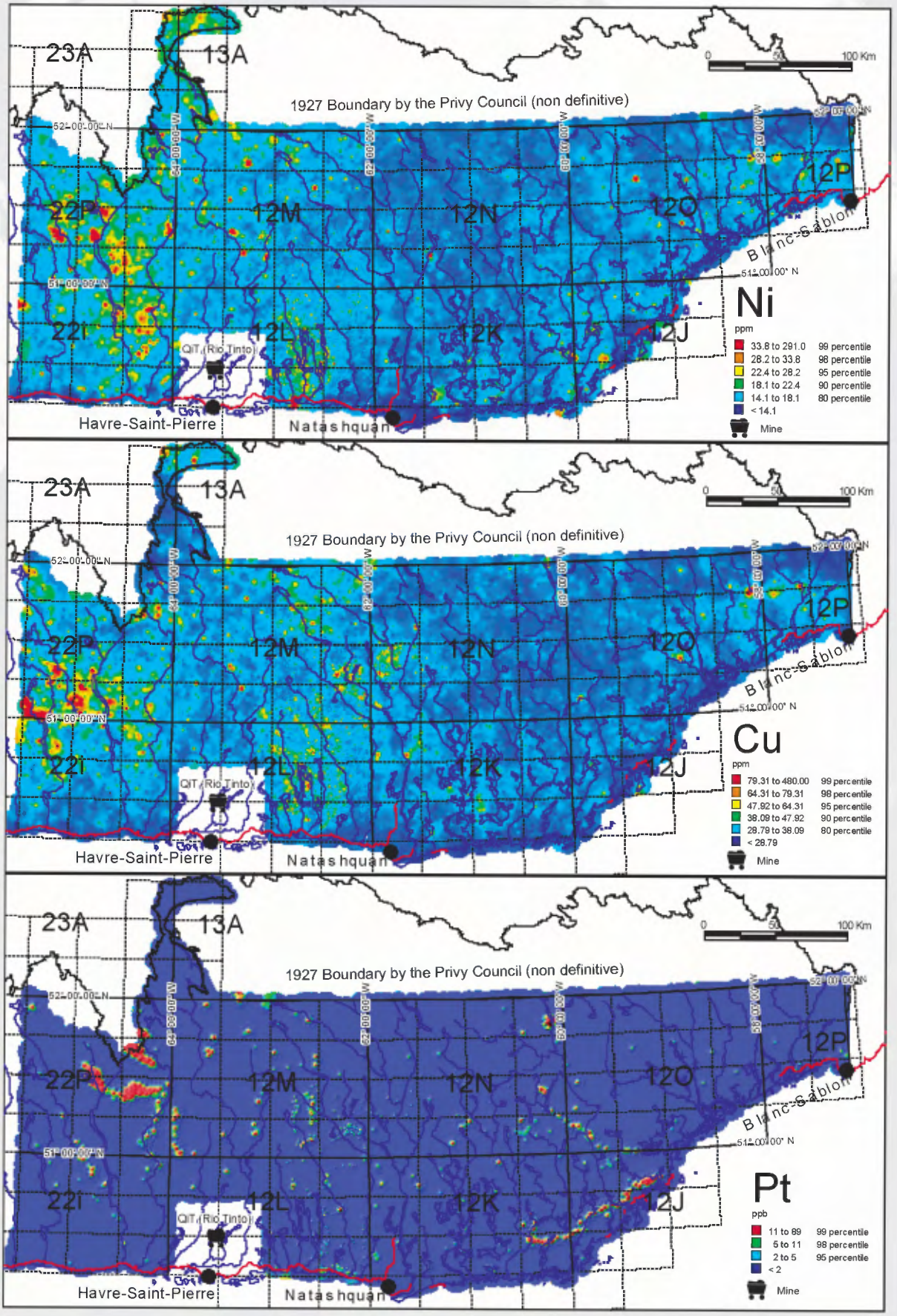

Figure 3 - Maps showing nickel, copper, and platinum anomalies in lake-bottom sediments.

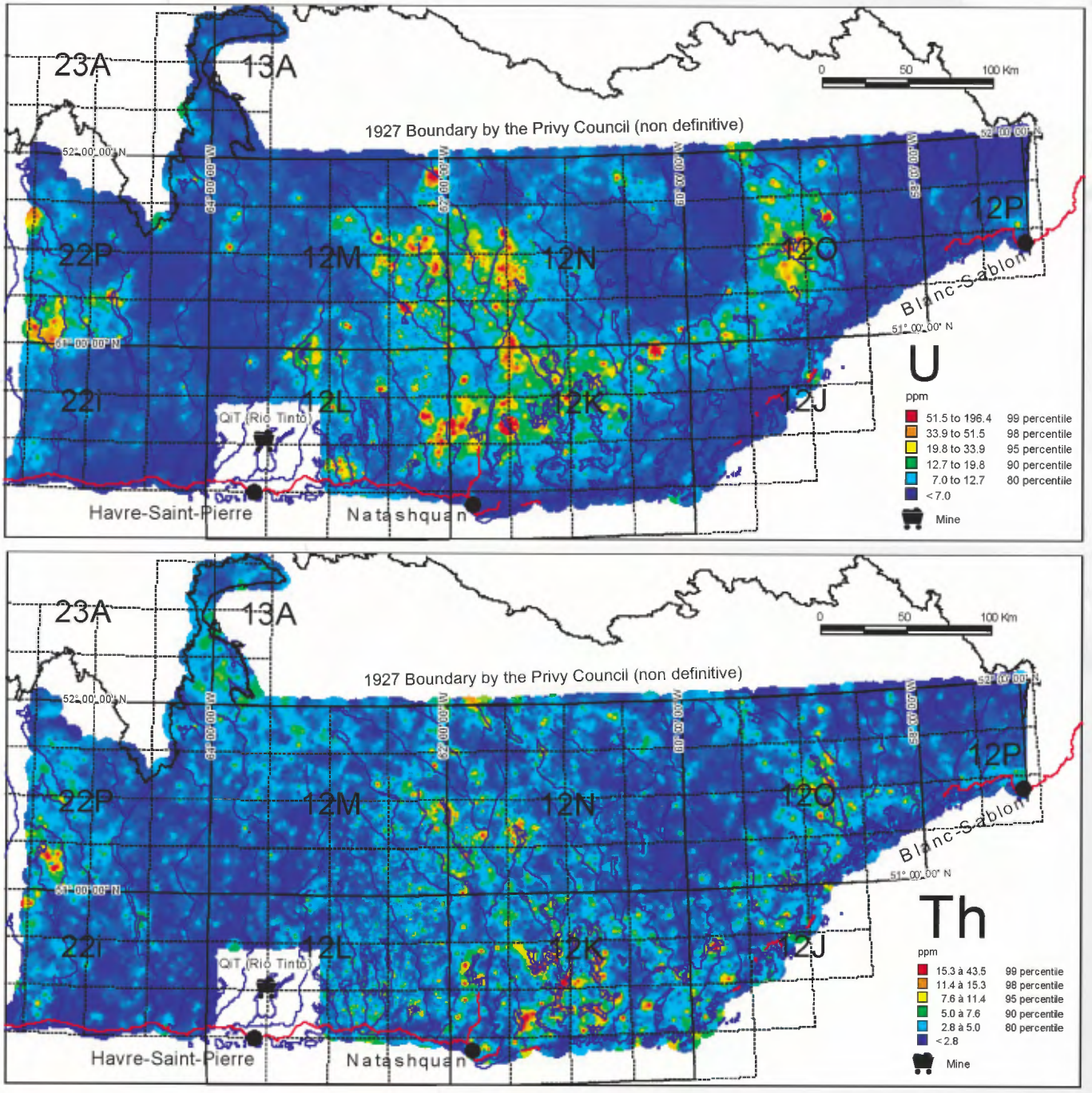

Figure 4 - Maps showing uranium and thorium anomalies in lake-bottom sediments.

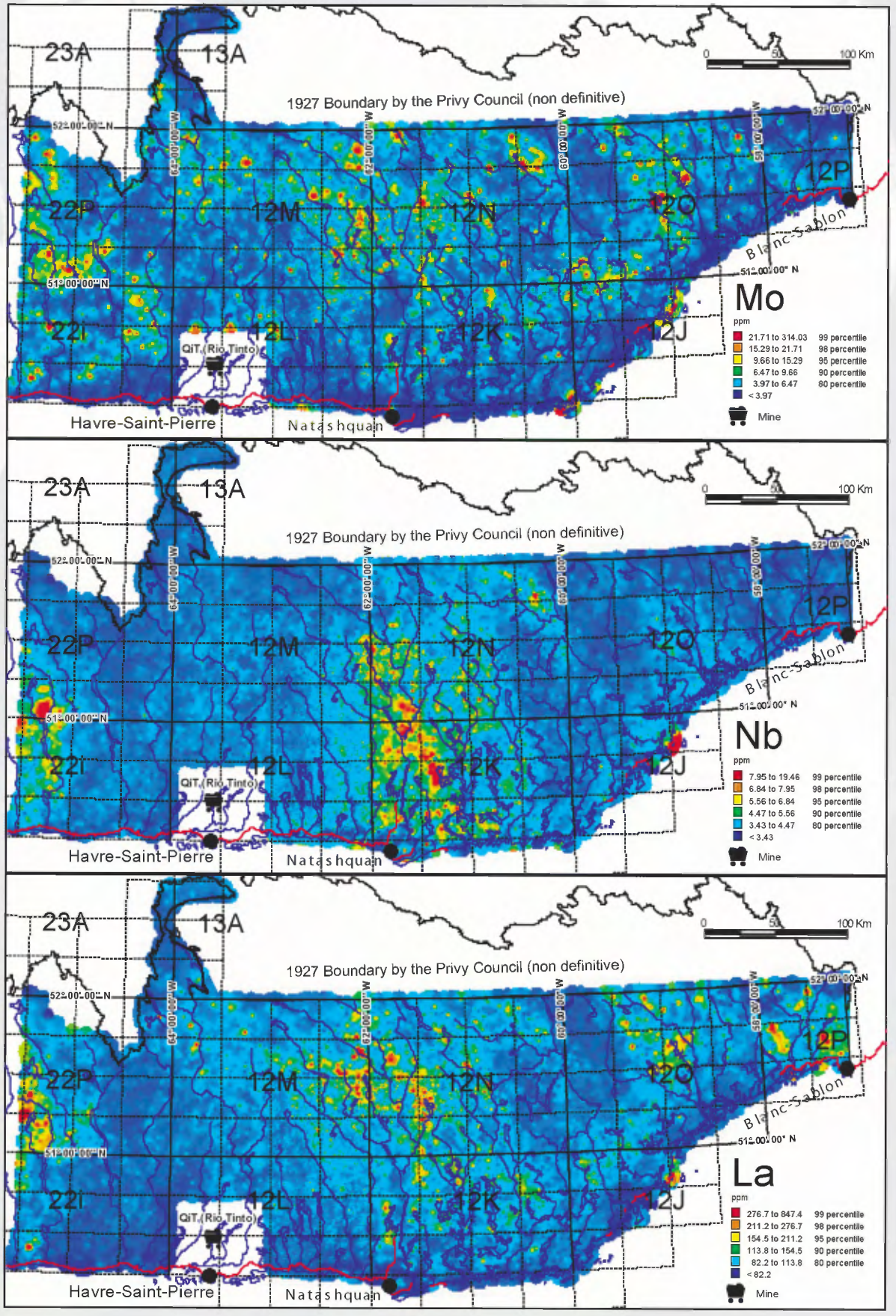

Figure 5 - Maps showing molybdenum, niobium, and lanthanum anomalies in lake-bottom sediments.

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