

# QIMC Reports Major Advancements in Ville Marie Geophysical Surveys for Natural Hydrogen Discovery and Launches Underwater Hydrogen Exploration and Sampling

Lachute, Quebec--(Newsfile Corp. - November 14, 2024) - Quebec Innovative Materials Corp. (CSE: QIMC) (FSE: 7FJ) (OTC Pink: QIMCF) ("QI Materials", "QIMC" or the "Company"), QIMC is pleased to share a major advancement in our geophysical and gravimetric surveys for the Ville Marie Natural Hydrogen discovery, further demonstrating our dedication to our precise and data-driven hydrogen exploration. This recent survey encompassed over 1,000 gravimetric measurements, carefully conducted at 50-meter intervals across an expansive 80-square-kilometer area in the St-Bruno-de-Guigues region. These efforts are critical in evaluating the thickness of sedimentary rock layers that overlay the Archean volcano-plutonic greenstone belt, providing essential insights into the conditions for hydrogen formation and migration.

Our team is now performing advanced 2D and 3D inversion analysis on this comprehensive gravimetric dataset. These analyses will enable us to create detailed gravimetric models for St-Bruno-de-Guigues, which will integrate seamlessly with data from the central and southern areas to establish a district-scale gravity model. This model will further enhance our geological understanding and help identify prime locations for the hydrogen and helium conduits.

We are also optimizing parameters for an upcoming electromagnetic survey (TDEM), scheduled for winter 2024 into early 2025. QIMC's proprietary TDEM system, designed specifically for hydrogen and helium prospecting, is a cutting-edge ground-based system that provides high-resolution electrical resistivity and chargeability profiles. With penetration depths of 100-200 meters and horizontal resolutions as fine as 15 centimeters, this system is vital for identifying key hydrogen conduits and mapping bedrock fracture networks hidden beneath layers of glaciolacustrine sediments. The resulting structural insights will be instrumental in guiding soil-gas prospecting and drilling efforts to pinpoint natural hydrogen dominant advective conduits.

## Hydrogen and Helium model

Following a successful hydrogen prospecting season in summer 2024-where our dedicated field team collected 1,100 samples, exceeding our original targets by double-we are setting ambitious goals for helium prospecting, with a comprehensive soil sampling program planned for 2025.

"As our geological model suggests, helium and hydrogen in this area appear to be generated through similar geological processes," notes Professor Marc Richer-Lafèche. "This model reveals a distinct distribution pattern: a helium-hydrogen mix towards the west, influenced by the Cobalt Group's arkosic rocks, which are rich in potassium and actinides, and a hydrogen-rich concentration towards the east, associated with the Baby Group's Iron Greenstone belt, where rocks are comparatively lower in potassium and actinides," states Professor Lafèche.

"This insight aligns with our strategy to efficiently explore and develop both helium and hydrogen along our Ville-Marie district," said John Karagiannidis, CEO of QIMC.

## Underwater Hydrogen surveys

QIMC and INRS team will be deploying an aquatic probe specifically designed to measure dissolved hydrogen concentrations in the waters of Lake Témiscamingue. "By analogy with the detection of hydrogen in soils (Soil Gas), the possibility of quantitatively measuring hydrogen concentrations in water will contribute to our model of hydrogen transfer mechanisms in the structures of the Lake

Témiscamingue Graben," notes John Karagiannidis, CEO of QIMC. These structures have been well documented by Sonar and CHIRP imagery and by seismic reflection surveys carried out by the Geological Survey of Canada.

The approach adopted by QIMC and INRS is based on techniques for detecting methane in aquatic environments and oceanographic techniques for detecting hydrothermal vents on mid-ocean ridges. The proprietary probe used can measure hydrogen and other important parameters such as bathymetry, water temperature, and pH and identify the advective conduits/chimneys.

The probe will be deployed in the winter of 2024 and early 2025 using holes drilled in the frozen surface of Lake Témiscamingue. For each hole, measurements will be taken at varying depths, producing kilometre-long sections of dissolved hydrogen concentrations in the lake. Among other things, the team will be paying particular attention to faulted sectors in the deepest parts of Lake Témiscamingue.

The winter survey will be followed by aquatic acquisitions using a boat and small craft capable of navigating Lake Témiscamingue and the Rivière à la Loutre (St-Bruno-de-Guigues), the Petite Rivière Blanche (Duhamel-Ouest) and the Rivière Blanche (Notre-Dame-du-Nord sector). These rivers flow through areas of sedimentary rock in the Témiscamingue graben.

"Lac Kipawa is a demonstration that regional seismicity causes an ascent of gas towards the subsurface. This is a demonstration on a human scale of the fast and dynamic gas transfer process in the Témiscamingue graben," states Professor Laflèche. "What is interesting is that Lake Kipawa is to the south of our property and Notre-Dame-du-Nord to the north St-Bruno. Between the two we have our hydrogen-rich and HE/hydrogen rich sector," further notes Professor Laflèche.

### **QIMC to exhibit at Reuters Live Energy Conference in Houston**

QIMC is pleased to announce our participation in the upcoming Reuters Events: Hydrogen North America 2024 in Houston on December 4th and 5th. We are excited to showcase our innovative solutions and projects in the rapidly evolving hydrogen sector. You can find us at Booth #315 in the Hydrogen section, where our team will be available to discuss our ongoing efforts and future initiatives aimed at driving sustainable growth and decarbonization in the energy industry. We look forward to connecting with industry leaders and exploring opportunities for collaboration as we work towards a cleaner and more resilient energy future.

QIMC is committed to leveraging proprietary state-of-the-art geophysical technologies and methodologies to responsibly unlock the natural hydrogen potential in Témiscamingue, supporting a sustainable, cleaner energy future. We look forward to sharing further updates on our progress and insights from these advanced surveys.

### **About the INRS and Pr. Marc Richer-LaFlèche, P.Geo.**

The Institut National de la Recherche Scientifique ("INRS") is a high-level research and training institute. Pr. Richer-LaFlèche's team has exceptional geological, geochemical and geophysical experience specifically in the regions of QIMC's newly acquired claims. They have carried out over six years of geophysical and geochemical work and collected thousands of C1-C4 Soil-Gas analyses.

M. Richer-LaFlèche also holds an FRQNT grant, in partnership with Quebec MRN and the mining industry, to develop and optimize a Soil-Gas method for the direct detection of mineralized bodies and faults under Quaternary cover. In addition to sulphide gases, hydrogen was systematically analyzed in the numerous surveys carried out in 2023 in Abitibi, Témiscamingue and also in the Quebec Appalachians. M. Richer-LaFlèche is the Qualified Person responsible for the technical information contained in this news release and has read the information contained herein.

In addition, the INRS team has several portable gas spectrometers and the sampling equipment and logistics necessary for taking gas samples and geophysical measurements on the ground or in the

aquatic environment. He is a professional geologist registered with the Ordre des géologues du Québec and is the Qualified Person responsible for the technical information contained in this news release and has read and approved the information contained herein.

For more information about Quebec Innovative Materials Corp. and its products, please visit [www.qimaterials.com](http://www.qimaterials.com).

### **About Québec Innovative Materials Corp.**

Québec Innovative Materials Corp. is a mineral exploration, and development company dedicated to exploring and harnessing the potential of Canada's abundant resources. With properties in Ontario and Québec, QIMC is focused on specializing in the exploration of white (natural) hydrogen and high-grade silica deposits, QIMC is committed to sustainable practices and innovation. With a focus on environmental stewardship and cutting-edge extraction technology, we aim to unlock the full potential of these materials to drive forward clean energy solutions to power the AI and carbon-neutral economy and contribute to a more sustainable future.

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