

## MSc project opportunity

### Metallogeny of the Douay syenite

The Metal Earth project, and in particular the igneous systems-dedicated team located at the UQAC University (Québec), is looking for one student having an interest for igneous petrology, economic geology and structural geology. The MSc project is fully funded by the Metal Earth project and will start in spring 2020. Although, the MSc student may be hired by Maple Gold for a period of time.

The UQAC research team, under the leadership of Lucie Mathieu and in collaboration with several professors of the UQAC and Laurentian universities, aims at unraveling the relationships between magmatic and mineralizing processes.

The aim of this MSc project is to gain insights into the intrusion-related gold systems (IRGS) metallogenic model by using the Douay project (Abitibi Subprovince, QC, Canada) as an example. The project has the following characteristics:

- Proposing a petrogenetic model (source and evolution of the magma) for Douay;
- Characterizing hydrothermal alteration (type, intensity, relative timing) and how it relates to gold mineralization;
- Identifying key geological controls on mineralization, including structural controls and controls on higher vs lower grade gold mineralization;
- Determining the timing and role of the different phases (syenite, quartz syenite, monzonite, alkaline gabbros, carbonatite, lamprophyre) of the Douay alkaline intrusive complex with respect to gold mineralization;
- Determine the timing of the different generations of structures, and their relationship to gold mineralization;
- Work with Maple Gold for access to site and core, and possibly participate in the drilling and relogging programs of Maple Gold;
- Perform detailed petrology, including texture and chemistry of the different generations of sulphide, and assess geometallurgical aspects including gold deportment).

If you are interested, please send your CV, a copy of your marks, the name and contact information of one to two referees and a motivation letter before the **15<sup>th</sup> of February 2020** to:

Professor Lucie Mathieu  
CERM, Département des Sciences Appliquées, UQAC  
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### UQAC institutional chair on Archean metallogenic processes

This chair is held by L. Mathieu at the University of Québec in Chicoutimi (UQAC), and is part of the Metal Earth project, which is led by the Mineral Exploration Research Center (MERC), Harquail school of Earth Sciences, Laurentian University, ON. Metal Earth is currently the most ambitious project on

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gold and base metals of northern America. The UQAC institutional chair on Archean metallogenic processes aims at unraveling the importance of magmatic processes in the concentration of precious and base metals. It has a special interest for the Abitibi Subprovince; i.e. Chibougamau and other areas.

For additional information: <https://merc.laurentian.ca/research/metal-earth>

<http://www.uqac.ca/portfolio/luciemathieu/>



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