



A transition
propelled by
our resources

November 21 to 24, 2022

PARTICIPANT GUIDE: DÉFI EXPLO

Québec City Convention Center

2022

RULES

Teams

Each invited university can register a team of three students. Two of these students must be enrolled in a full-time undergraduate program in Earth Sciences. The third student must also be enrolled full-time in Earth Sciences, but at any cycle.

Universities must register their team by **Friday, October 28, 2022** with the contest coordinator, **Mr. Mehdi A. Guemache**, at mehdi.guemache@mern.gouv.qc.ca. Registration is free.

Each member of the team, as well as their department head or representative professor, will be registered for free at the congress (conference and exhibition pass) and will only have to go to the reception desk to receive their badge.

Goal

The purpose of the Défi Explo is to assess the mineral potential of a specific area in Québec, identify a prospective zone and establish an exploration program. Academic teams will work on the same study area and will have 12 hours to develop a program and submit a PowerPoint report of up to 20 slides. The jury will base its evaluation on the content of this presentation.

PROCESS

A computer workstation containing all data from the Système d'information géominère du Québec (SIGÉOM - Geomining Information System) available on the selected area, as well as software to process them, will be assigned to each team. The marathon will begin **on Tuesday, November 22, 2022 at 8:00 a.m.** At that time, teams will be familiar with the study area perimeter. They will have to submit their report **by 8 p.m. on the same day**.

Using the data and tools provided, teams will have:

- to locate a block of 60 claims in the study area,
- then, to build an exploration program on these claims.

The claims will be identified using the available claims grid for the area that will be provided, and it will not be possible to use already-staked lots. Teams will then be asked to explain and illustrate their strategy in a PowerPoint presentation of up to 20 slides.

The exercise will be held **in the level 4 Loggia at the Centre des congrès de Québec**, in the north part of the main lobby. Workspaces will be closed with crowd control barriers so that congress attendees can see the teams evolve without disturbing them.

Exchanges with the public will be restricted by controllers. Lunches and snacks will be provided to the teams so they do not have to leave to eat.

Available software

Each team will have a workspace with a computer station where the following applications and data will be installed::

- ArcGIS 10.7
- Extension Spatial Analyst
- Geosoft Plug-in for ArcGIS
- QGIS
- Microsoft Office 365 suite
- Adobe Illustrator CS6
- FGDB (ArcGIS) and GPKG (QGIS) of SIGÉOM for the selected sector
- Geophysical data available in matrix form
- Access to GESTIM.

No other software may be installed; however, participants will be able to use their own computer freely, without any restrictions.

Support

The only support granted at all times to the teams will be IT support, in the event of a breakdown or breakage. If required, replacement computer stations will be available on site. Teams are responsible for maintaining backup copies of their work.

However, teams will have access to 4 jokers:

- 2 technical jokers,
- 1 professor joker,
- and 1 colleague joker.

A technical joker provides access to a technical assistant for a question related to the use of the software (except QGIS) or databases provided. Technical assistants may not always be present at the location of the contest, but they will be available at the congress venue and may be contacted by the controllers and travel to answer questions.

The professor joker gives the right to a **10-minute** consultation with a professor, or associate professor, from the team's university.

The colleague joker gives the right to a **10-minute** consultation with a student colleague from the team's university.

Participants speak to controllers to use their jokers. It is the responsibility of the teams to advise controllers on how to reach teachers or colleagues.

In addition, training on the use of government geoscientific data will be provided to all participants to the Défi. This training will be held on **Monday, November 21, at the Centre des congrès de Québec from 5:00 p.m. to 6:00 p.m.** Teams will then be able to familiarize themselves with the various digital tools that will be made available to them, on the same computer stations that will then be used to conduct the Défi.

Report

At 8:00 p.m., teams will submit their report to the contest coordinator via a USB key. The report will consist of a **PowerPoint file of up to 20 pages**. It will explain in detail the approach taken, from the identification of the 60 claims sector to the details of the exploration program. The report will need to be illustrated with maps and will also need to speak for itself, as teams will not be making an oral presentation to the jury.

The report will be based on regional geological data and address the metallogenic model(s) that led to the identification of the selected area. It will propose a detailed exploration campaign, at various stages, and an evaluation of the expected results at each stage.

The report will be judged on the following points:

- clarity of information and overall quality of presentation (is the report easy to understand and well-illustrated?) - **10%**
- good use of available data (were the data used in a correct and relevant manner?) - **25%**
- relevance of the geological model presented in metallogenic terms (is the proposed metallogenic model appropriate and suitable for the environment?) - **20%**
- relevance of the model presented in economic terms (is the project economically viable?) - **10%**
- relevance of the proposed exploration actions with respect to the intended objectives (are the proposed exploration works the ones that will offer the best results in relation to the type of deposit being sought?) - **25%**
- originality of the project (is the project innovative?) - **10%**

Jury

The jury will consist of three people with experience in regional metallogeny and development of exploration projects. These people will be able to follow the progress of the teams throughout the day if they wish.

At **5:00 p.m.**, the teams will present to the jury the outline of their exploration project for 5 to 10 minutes.

The jury will deliberate on **Wednesday, November 23, between 8:00 a.m. and 10:00 a.m.** The evaluation will be based on reports only and will not take into account the previous day's presentations. The winning team will be announced the same day at the awards ceremony.

Prize

The winning team will receive a \$3,000 grant from the Diversification of Exploration Investment Partnership (SIDEX). Various participation prizes will be awarded to the other teams.