



SOCIETY OF ECONOMIC GEOLOGISTS, INC.

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Student Chapter Annual Report Cover Page

Submission Deadline: September 30th

Submit to: studentprograms@segweb.org

Month/Year Reported: From 09-2022 (mm/yyyy) – To 09-2023 (mm/yyyy)

STUDENT CHAPTER:

Check if update needed at segweb.org

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Chapter Executive Committee (*in office during the time frame captured on this report*) (type "Vacant" if position not filled):
The new committee is reported on the Student Chapter Membership Information form (SCMIF).

President: Florent BIGOT florent-bigot@live.fr
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Sponsoring Institution or Company(name): BARRICK GOLD CORPORATION

ANNUAL ACTIVITIES REPORT 2022-2023

Student Chapter SEG-UQÀM





Student Chapter Members

Florent Bigot*
Júlia Mattioli Rolim*
Jérémie Côté*
Jean-Simon Caunter*

Hichem Khalifa
Emilio Lopez
Hugo Chareton
Camil Vachon-Laberge
Mansouri Wafa
Edith Dupré Vailières
Isabelle Sirois
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Laura Vachon
Jorge Alejandro Guevara Alday
Masha Adibi
Félix Laflamme
Rocio Pedreira Perez
Walyde Veronique
Adina Bogatu
Manon Valette
Gil Pedro Valente Cavalcanti De Albuquerque
Larissa de Santana Do Nascimento
Gilbert Poirier
Laurence Guyot-Messier

* : executive committee



Introduction

For the SEG-Université du Québec à Montréal (UQAM) Student Chapter, 2022-2023 was a year rich of activities. We worked on the organization of a week's field trip in Nevada, to discover the local geology and the Carlin deposits. The fieldtrip will take place in October to have ideal weather to visit outcrops and mining sites. Several smaller-scale activities also took place during the year such as the Niobec mine visit, the Elemission workshop, and meetups with other chapters...

One of the main objectives for the 2022-2023 year was to get closer to the SEG-McGill Student Chapter as well as to the other student chapters in Quebec (Laval, Chicoutimi University).

For the new year, we would like to continue our collaboration with the other chapters, and especially with the McGill university Student Chapter with the project of a conjoint conference day and geological excursions.

Budget

As of the 31st of September, the Chapter's assets come to CAD\$ 5,992.63 including CAD\$ 2,642.44 from the SEG Wallace Student Chapter Grant. We greatly thank the SEG for its support. This amount will be available for future Chapter activities and for the Nevada field trip. A report will be made after this field trip.

2022-2023 main activities

Elemission workshop

The 7th of October 2022, three student members of the SEG-UQAM attended a workshop, organized by the company ELEMISSION in Montréal (Québec). Our chapter was invited by the SEG Chapter of McGill University, which organized this workshop conjointly with Elemission.

The group was given an overview of chemical analysis methods, hyperspectral imaging as well as the technology of drill core analysis based on Laser-Induced Breakdown Spectroscopy (LIBS).

The student chapters were invited by Elemission and no fees were asked by the company for the workshop. We were very grateful to the company to do such a gesture for the Chapter.



WORKSHOP

ECORE - the ultimate drill core scanner for ore body knowledge

ELEMISSION Inc. is very excited to invite you to a workshop on drill core scanning using the ECORE technology that uses Laser-Induced Breakdown Spectroscopy (LIBS) as part of its multi-sensor suite. ECORE is:

- The only sensor able to directly characterize minerals bearing light elements (i.e. H, Li, B, C, N, O, etc).
- An ideal method for the characterization of critical minerals resources as well as other commodities.
- A first sensor to market broad investigative possibilities that were not possible before.

In this workshop, you will learn how to get more data from drill core to enhance your ore body knowledge. The following topics will be discussed:

- Introduction to LIBS
- LIBS hyperspectral imaging
- Quantitative automated mineralogy
- Depth mineral contents
- Depth chemical assays from H to U
- and more...

We would love to see you,

ELEMISSION, Inc.

Date: October 7, 2022

Time: 1:00 pm

Duration: 3 hours

Location:

ELEMISSION, Inc.
3410 bvr. Thimens
Saint-Laurent, Québec

Figure 1 : Invitation to the Elemission workshop.



Niobec Mine visit

From March 15th to 16th, seven students (MSc and Phd students) from the SEG-UQAM were invited by Magris Ressources to visit the Niobec Mine in Saint-Honoré (Québec, Canada). Two students from the SEG Chapter of McGill University joined the group, as well as the professors Stéphane De Souza (UQAM), Anthony E. William Jones (McGill) and the research associate Olga Vasyukova (McGill). The Niobec mine visit was a great opportunity to discover a niobium deposit since there are only three niobium mines on the planet, two in Brazil, which provide nearly 90% of the world production, and one in Quebec, which provides nearly 10% of the world production. For some students it was also their first descent into an underground mine.

The visit was the subject of a publication in the UQAM newspaper (in french), available at: <https://actualites.uqam.ca/2023/visite-une-mine-au-saguenay/>

The visit started with a safety meeting followed by an underground tour between 400 and 600 meters depth. In the galleries, students were able to observe niobium mineralization (pyrochlore) in a carbonatite. After 4 hours underground the group was invited to the core shack to observe some mineralized cores. At the end of the visit, the company's geologists gave a presentation on the geology and the process of niobium production. The presentation was followed by a rich discussion on the formation processes at the origin of the Niobec deposit.

Budget

Enterprise Rental Car	CAD\$ 243.08
Gas	CAD\$ 155.38
Le Montagnais Hotel (Chicoutimi)	CAD\$ 523.84
Breakfast at le Montagnais	CAD\$ 154.88
Total SEG	CAD\$ 1,077.18

The cost of this excursion was fully cover by the profits from the Québec-Mines workshop.

Figure 2: Niobec Mine shaft.



Figure 3: UQAM-McGill participants to the Niobec mine visit.



Québec Mines et Énergie workshop

Our SEG Student Chapter organized, in collaboration with UQAC and Laval-INRS SEG student chapters and with the support of Jean-Luc Pilote (Geological Survey of Canada), a full-day short course entitled: *“Strategic and critical metals”*. This workshop took place during the 43rd edition of the Québec-Mines et Énergie (QM+É) congress organised by the MERN (Ministère de l’Énergie et des Ressources naturelles du Québec) in the Québec congress center (Québec city), on the 21st of November 2022. The course was given by 8 specialists of critical metals including academic scientists and professional geologists.

Details of the day's schedule:

Hour	Speaker	Thematic
8h30-8h35	SEG Student chapters	Introduction
8h35-9h25	Patrice Roy (MERN)	Quebec Government Strategy
9h25-10h15	Geneviève Marquis (Geological Survey of Canada)	Canada Government Strategy
10h15-10h30	Coffee break	
10h30-11h35	Simon Jowitt (University of Nevada)	Critical Metals – a global overview
11h35-13h10	Lunch break	
13h10-13h50	Clémence Dubreuil (COREM)	Metallurgy
13h50-14h40	Bertrand Rottier (Laval University)	REE: A complex market and Grenville example.
14h40-14h55	Coffee break	
14h55-15h45	Paul Bédard (UQAC)	Ideal conditions to form a Nb deposit: Saint-Honoré deposit
15h45-16h35	Antoine Cloutier (Nouveau Monde Graphite)	Graphite
16h35-17h25	Louise Corriveau (Geological Survey of Canada)	Au, Bi, Co, Cu, ETR, In, Mo, Ni, V, W, etc.
17h25-17h30	SEG Student chapters	Question period and closing remarks

The critical metals workshop was a real success with 49 participants including 40 professionals. The benefits (12 229.31 \$CAD) were split between the three SEG Student Chapters.

Other activities

Question/Answer meeting with the SEG McGill Student Chapter

On the evening of November 10th, the SEG McGill Student Chapter invited our chapter for a talk with François Robert, Former Chief Geologist - Global Exploration Barrick Gold and industry advisor of their chapter. Five students of the SEG-UQAM chapter joined the meeting and had the opportunity to talk about their research project and to discuss with F. Robert on geology and careers in the mining industry. It was also a good occasion to exchange with the other students in geology from McGill university.

Meeting UQAM-McGill SEG Student Chapters

As part of our desire of collaboration between our two chapters, we organize conjointly several meetings this year to discuss about geology, work experiences and common projects over a drink in Montreal.



Figure 4: Meeting with François Robert (McGill industrial advisor)



Figure 5: Students from UQAM and McGill student chapters during a snowfall in Montréal (January 30th)

Mining lunches (Dîners miniers)

Held on the last Wednesday of each month from September to May, the Dîner Minier is a lunch-conference organized by SIDEX and its partners in Montréal. Each month, a different speaker is

invited to give a talk about the geology, finances, mining processes or management of his company.

The Dîners Miniers are a good opportunity for the students to network, meet professionals and students from others Montreal university, as SIDEX gracefully invites 6 students from universities owning a geology or a geological engineering program (UQAM, McGill, and Polytechnique Montreal).

This year, 15 students from our student chapter had the opportunity to attend one of the 8 Dîners Miniers.

Figure 6: Invitation to the 5th Mining Lunch

INVITATION TO THE MONTRÉAL MINING LUNCHES
 SIDEX, FONDS DE SOLIDARITÉ FTQ, PWC, LA CAISSE DE DÉPÔT ET PLACEMENT DU QUÉBEC AND RESSOURCES QUÉBEC INVITE YOU TO THE NEXT MINING LUNCH ON WEDNESDAY APRIL 26 2023 FROM NOON TO 1:30 P.M. AT THE BIER MARKT RESTAURANT 1221, BOUL. RENÉ-LÉSVESSQUE OUEST



Conference theme

Mr. Robert Wares
 Chairman of the board and CEO
 Osisko Metals Inc.

Will present a conference entitled :
 « Mines Gaspé - vers la prochaine mine de cuivre du Québec »

(conference in French only)

SPEAKER

MR. ROBERT WARES

Chairman of the board and CEO
 Osisko Metals Inc.

Registration

You can register for the event, online only, by clicking on the following link:
<https://app.billetsenvrac.ca/fr/events/1942>

There is no possibility of cancellation.

However, tickets are transferable.
 Do not forget your electronic ticket at the event.

If you have any question concerning registration, you can reach Matisse Dehaye by e-mail only at reservationsbiermarktmf@gmail.com





Portugal Excursion

The SEG Student Chapter from Laval-INRS (Québec) organized a field trip to Portugal between the 2nd and 9th of September this year and opened 2 seats for students from other student chapters in Quebec. Two members of our Student Chapter participated to the field trip, and greatly thanks the Laval-INRS Student Chapter for the organization of the trip and the invitation. The field trip focused on different types of mineral deposits including VMS, Li-pegmatite, and W-Sn-cupola. It included visits to mine sites, underground visits, as well as field outcrops.

The group got introduced to Volcanogenic massive sulfide (VMS) deposits in the Iberian Pyrite Belt, which included visits to the Lousal Science Center and the active underground mines of Neves Corvo and Aljustrel. Students were able to have a comprehensive view of the portuguese side of the belt, and compare different host rocks (metasedimentary, metavolcanic), ore-types (Cu- and Zn+Pb-rich), as well as observe outstanding outcrops and core illustrating particular features associated with the genesis of the deposits. The group also had the chance to visit the Panasqueira Mine, a unique example of a W-(Sn+Cu)-rich lode deposit that has been in production for more than 120 years. A tour to the processing plant, where the ore is processed and recovered was also included in the visit.

Future activities

Planned Projects

- Field trip to Eleonore Mine, in the James Bay area (Québec) at the end of October. 8 participants from UQAM and 2 from McGill Universities are expected.
- Gold Panning around Montréal before the snowfall in Québec.
- Meetups with McGill Student Chapter
- Nevada (USA) field trip for 10 students, including a student from SEG-McGill student chapter. The field trip will take place between the 6th and 13th October. The trip will be led by our Industry advisor Marc Bardoux (Barrick Gold). Our academic advisor Pr. Stephane de Souza will join the group as well as professional geologist Olivier Côté-



Mantha (Agnico Eagle). The field course will focus on the geology of Nevada, especially on the processes related to the formation of Carlin-type deposits. This field course is partially funded by the Wallace Student Chapter Grant, provided by SEG and a complete report will be done after the trip.

- Québec Mines et Énergie workshop. The UQAM Student Chapter is currently organizing, in collaboration with UQAC and Laval-INRS SEG student chapters, a full-day short course entitled: “Lithium: the potential of an increasingly popular element”. This workshop will take place during the Québec-Mines et Énergie 44th meeting organised by the MERN (Ministère de l’Énergie et des Ressources naturelles du Québec) on the 22nd of November 2023. McGill SEG Student Chapter will join the organization for the first time this year.

Projects to organize

- Half-day conferences during winter probably around lithium.
- SIG workshop