Mines from every angle

OFFICIAL PROGRAM

November 23-26, 2015
Québec City Convention Centre
QUEBECMINES.GOUV.QC.CA

ENSEMBLE on fait avancer le Québec

Québec
PRACTICAL INFORMATION

OPENING HOURS OF THE REGISTRATION DESK
Sunday: 5:00 p.m. to 7:00 p.m.
Monday: 7:30 a.m. to 6:00 p.m.
Tuesday: 7:30 a.m. to 5:00 p.m.
Wednesday: 8:00 a.m. to 6:00 p.m.
Thursday: 8:00 a.m. to 2:00 p.m.

OPENING HOURS OF EXHIBITION ROOM
Tuesday: 9:00 a.m. to 5:00 p.m.
Wednesday: 9:00 a.m. to 5:00 p.m.
Thursday: 9:00 a.m. to 1:00 p.m.

FOLLOW QUÉBEC MINES IN SOCIAL MEDIA
Facebook: www.facebook.com/QuebecMines
LinkedIn: linkd.in/19b0ITc
Flickr: www.flickr.com/photos/quebecmines
YouTube: www.youtube.com/channel/UCOEtGSXNEeEppUj8tJRX2hw
Twitter: www.twitter.com/MERN_Quebec
@MERN_Quebec and #quebecmines

SUSTAINABLE TRANSPORTATION
During the convention, we invite you to use sustainable transportation methods, such as walking, cycling, car-pooling, taxi-sharing and the public bus service.

Exhibition room maps and exhibitors’ list, page 34
A WORD FROM THE MINISTER FOR MINES, MR. LUC BLANCHETTE

It is with great enthusiasm that I invite you to attend Québec Mines 2015 under this year’s theme Mines from Every Angle. This convention, organized for the past 35 years by the Ministère de l’Énergie et des Ressources naturelles, gathers everyone together with an interest in Québec’s mining development, whether it be industry representatives, the general public, researchers and undergraduates.

“NO MATTER WHO YOU ARE, QUÉBEC MINES IS AN EXTRAORDINARY VENUE FOR LEARNING, DISCOVERING AND NETWORKING”

This year’s program is of the highest quality. It offers a wide range of talks, workshops and networking activities given by people of high calibre, many with an international reputation. As for large-scale government projects — the Plan Nord, the Chantier sur l’acceptabilité sociale, the Maritime Strategy, and of course the Strategic vision for Québec mining development — the convention will cover vital subjects on these fronts, whether it be recent exploration work, the financing of exploration projects, mining development in northern settings, nickel exploration, research, the use of technology at all stages of the mining process, new geological discoveries or the social acceptability of mining projects.
“THE EXHIBITION HALL WILL SHOWCASE THE KNOWLEDGE, EXPERTISE AND KNOW-HOW OF ALL THOSE INVOLVED IN MINING DEVELOPMENT IN QUÉBEC”

The Ministry will also unveil the results of its annual geological work, which typically identifies new exploration targets. The international facet of the convention will build bridges between our province and elsewhere, especially in light of the *Stratégie économique pour la Francophonie*, which was adopted during the 15th Francophonie Summit held in Dakar in November 2014.

One thing is certain: Québec Mines will highlight the province’s geoscientific knowledge and the development of its mining industry. It is the premier rendezvous for key actors in the mining sector, at home and abroad.

I hope to see you in great numbers from November 23 to 26, 2015.

Luc Blanchette
Minister for Mines
WORD FROM THE DEPUTY MINISTER FOR MINES

I’m proud to invite you to Québec Mines, the annual ministère de l’Énergie et des Ressources naturelles en matière de développement minier convention. This unifying and open to the world convention brings together stakeholders from here and elsewhere in the mining world. So for a few days, Québec Mines will raise the issue of mining development from all angles.

We are able to present a rich and exciting program each year which includes many networking activities. Québec Mines 2015 is certainly worth a visit! There will be 13 workshops and training sessions, as well as nearly 90 high-level conferences over 15 sessions that are structured around three major themes: the economy, environment and society; mining; and finally, geology and exploration. It includes several exclusive features and brings together internationally renowned specialists to a workshop and two nickel exploration conference sessions! This is a unique event in North America!

I wish to emphasize that this major convention is counting on the invaluable participation of several community partners again this year and I would like to thank them for their involvement. The exceptional quality of the Québec Mines program demonstrates its commitment to benefitting all convention participants.

I invite you to fully enjoy Québec Mines 2015.

Line Drouin
Associate Deputy Minister, Mines Sector
Ministère de l’Énergie et des Ressources naturelles
Québec Mines, the crossroads of geoscience and mineral resources, is intended for everyone who has a direct or indirect interest in Québec’s mining sector.

MINES FROM EVERY ANGLE
Québec Mines addresses every component of mine development, including the scientific, technical, economic, environmental and social aspects, from the standpoint of research, exploration, extraction and mine restoration. It provides opportunities for discussion of sustainable development and social acceptability, and offers true networking and business activities. The event is attended by everyone with a direct or indirect interest in mineral resource development in Québec.

INTERNATIONAL
With its INTERNATIONAL component, Québec Mines’ program invites convention participants from a range of countries to see Québec’s expertise in the field of mineral exploration and mining development.

The activities of this component are marked: [QM INTERNATIONAL]

Québec Mines Discovery educational, employment and general public component of Québec Mines conference. Québec Mines Discovery invites the general public to come discover earth sciences, the various facets of mining and mineral exploration and career opportunities in this vast scientific and technical field.

The activities of this component are marked: [QM Discovery]
QUÉBEC MINES TEAM

ORGANIZING COMMITTEE AND COMMUNICATION TEAM
Andrea Amortegui
Gladys Chamberland
Christian Fortin (Coordinator)
Robert Giguère
Charlotte Grenier
Jean-Yves Labbé
Alain Vigneault

LOGISTIC TEAM
Yan Carette
André Cloutier
Diane Devault
Marie Dussault
Marie-Josée Hudon
Marie-Eve Lagacé
Caroline Nadeau
Sylvie Otis
Pierre-Thomas Poulin
Gaétan Simard

TECHNICAL PROGRAM
Michel Jébrak
Jean-Yves Labbé
Marcel Laflamme
Jean Vavrek

QUÉBEC MINES DISCOVERY ORGANIZING COMMITTEE
Julie Gagné
Charlotte Grenier
Sylvie Otis (Coordinator)

QUÉBEC MINES INTERNATIONAL ORGANIZING COMMITTEE
Robert Giguère
Nicole McKinnon
Jean-Benoît Ratté
Alain Vigneault

COLLABORATORS
Association des économistes québécois
Association minière du Québec
Association québécoise des sciences de la Terre
First Nations of Quebec and Labrador Economic Development Commission
Comité sectoriel de main-d’œuvre de l’industrie des mines
Conseil d’intervention pour l’accès des femmes au travail
CONSOREM
THE MINISTRY WANTS TO THANK THE FOLLOWING PERSONS FOR THEIR CONTRIBUTION TO THE ORGANIZATION OF THE EVENT

Sadi Aid
Stéphan Baribeau
Noémie Beaupré
Stéphane Beauséjour
Serge Bédard
Caroline Béliveau
Samir Bouaouni
Marlène Bouchard
Roxanne Croteau-Thomassin
Benoît Demers
Claude Dion
Daniel Dubé
Nathalie Germain

Daniel Faustino Silvestre
Johanne Jobidon
Claudie Laplante
Martine Lévesques
Terry McKinnon
Sonia Montambault
Joanne Nadeau
Michaël Roy
Jérémi S.Pressé
Jack Schlott
Anne Veilleux
Audrey Verreault
André Tremblay
SUMMARY

QUÉBEC MINES
Short courses and workshops

Evening
Icebreaker

[QM INTERNATIONAL]

Afternoon
Icebreaker activity for international delegates and foreign representatives
8:30 a.m. Portable XRF analyzer: use and applications
Marc Constantin (UL), L. Paul Bédard (UQAC), Pierre-Simon Ross (INRS)
Length: Full-day session
[Room 307B]

9:00 a.m. Let’s talk about mines!
Louis Bienvenu, Andrée-Marguerite Latour (MERN) and Michel Gilbert (Chaire en entrepreneuriat minier UQAT-UQAM)
Length: Half-day session
[Room 308B]

9:00 a.m. Mafic-ultramafic magmatic systems and their Ni-Cu-PGE mineralizations
Nicholas Arndt (Université Joseph Fourier, France), C. Michael Lesher (MERC-LU) and Wolfgang D. Maier (Cardiff University, Royaume-Uni)
Length: Full-day session
[Room 309B]

9:00 a.m. Triple the results of your exhibitions
Face à Face Marketing
Length: Half-day session
[Room 308A]

9:00 a.m. New exploration tools and approaches for the Abitibi Sub-Province
Stéphane Faure, Silvain Rafini, Ludovic Bigot, Lucie Mathieu and Réal Daigneault (CONSOREM)
Length: Full-day session
[Room 309A]

1:30 p.m. Golden rules for the good use of geophysical tools–How to choose the right tools
Pierre Bérubé (Abitibi Géophysique)
Length: Half-day session
[Room 307A]
1:30 p.m. **Mine restoration 101**  
Martine Paradis (MERN)  
Length: Half-day session  
[Room 308B]

1:30 p.m. **Mines and Standards**  
Hélène Giroux (MERN)  
Length: Half-day session  
[Room 308A]

**ACTIVITIES**

4:00 p.m. **Icebreaker activity for international delegates and foreign representatives**  
[Room 302AB] [QM INTERNATIONAL]

5:00 p.m. **Icebreaker**  
[Foyer 4 - Loggia]
SUMMARY

QUÉBEC MINES

Morning
Official opening
Plenary session
  - Preserving 50% of the territory covered by the Plan Nord: Situation and prospects
Business and Networking
  - Environment/mines networking (2nd edition)
Conference lunch
  - Social acceptability: an innovative approach focused on the future

Afternoon
Conferences sessions
  - Economic outlook for natural resources: Where do we stand?
  - The challenges of mining engineering
  - The Mine Heritage Component of the Natural Resource Fund: Seven years of knowledge acquisition, research and development
Workshops
  - Women and mines: Working together for a Québec action plan
  - Discussion workshop on the draft Aboriginal community consultation policy for the mining sector

Evening
Geococktail Québec Mines - Tugliq
  - Book launch: Quels métaux pour demain? Les enjeux des ressources minérales
  - Poetry and saga of the first mine wind generator in Nunavik

[QM INTERNATIONAL]

Afternoon
Seminar on mining development in the French-speaking world
9:00 a.m.   Official opening

CONFERENCES

ECONOMY, ENVIRONMENT AND SOCIETY

10:00 a.m.   Plenary session – Preserving 50% of the territory covered by the Plan Nord: Situation and prospects  
[Room 301]  
Moderator: Robert Giguère (MERN)  
First part: Robert Sauvé (Société du Plan Nord) and M. Patrick Beauchesne (ministère du Développement durable, de l’Environnement et de la Lutte contre les changements climatiques)  
Second part: Suzanne Méthot (consultante), André Gaumond (Redevances aurifères Osisko), Patrick Gonzalez (professeur d’économie, Université Laval)

ECONOMY, ENVIRONMENT AND SOCIETY

ECONOMIC OUTLOOK FOR NATURAL RESOURCES: WHERE DO WE STAND?  
Chairs: Imad Rherrad, Jean-Philippe Brosseau and Jean Labbé (ASDEQ)  
[Room 301]

2:00 p.m.   Metal prices, currencies & global growth, outlook 2015-2017 – Will China remain a growth market medium term?  
Patricia M. Mohr (Scotia Bank)

2:50 p.m.   No quick fix: The state of mineral exploration financing  
Glenn J. Mullan (Golden Valley Mines)

3:15 p.m.   Technological changes and the rare earths market  
Alain Rollat (Global Business Unit Special Chem - Groupe Solvay)
MINE OPERATIONS

THE CHALLENGES OF MINING ENGINEERING

Chairs: Claude Ferland (AMQ) and Marcel Laflamme (UL)
[Room 302]

2:00 p.m. Summary of the various phases and conclusions of the McLeod Deep deposit feasibility study
François Pronovost (Glencore)

2:30 p.m. Development and testing of high-performance synthetic ropes for mine hoisting
Part 1 - Comparative testing and NDT methods for synthetic mine hoist ropes
Elizabeth Huntley (COO Whitehill Mfg.)

Part 2 - Costs and benefits of replacing steel cables by equivalent high-performance synthetic cables for production hoisting in deep and ultra-deep underground mines
Raymond J. Gaëtan (Natural Resources Canada, CanmetMINES)

3:30 p.m. The challenges of Alimak mining at the Langlois mine
Jean-François Dorion (Nyrstar Langlois)

4:00 p.m. Logistics and challenges for dike construction in Northern Québec
Steve Quessy (Canadian Royalties)

4:30 p.m. Automation as a solution to challenges faced in mining
Mikko Koivunen (Sandvik)

GEOLOGY AND EXPLORATION

THE MINE HERITAGE COMPONENT OF THE NATURAL RESOURCE FUND: SEVEN YEARS OF KNOWLEDGE ACQUISITION, RESEARCH AND DEVELOPMENT

Chairs: Réal Daigneault (CONSOREM-UQAC) and Patrice Roy (MERN)
[Room 303]

2:00 p.m. Seven years of geoscience knowledge acquisition: Overview of work and new findings
Patrice Roy, Guillaume Allard, James Moorhead (MERN) and other geologists of the MERN
### 2:25 p.m. Synthesis of geological work on the Opinaca and La Grande subprovinces: Implications for gold exploration
Jean Goutier (MERN), MERN geologists, and the geological research team at Université Laval

### 2:50 p.m. UQAT-UQAM mining entrepreneurship chair: From the mine to the communities
Michel Jébrak (UQAM) and Suzanne Durand (UQAT)

### 3:15 p.m. CONSOREM: A specific business model for R and D in mineral exploration
Réal Daigneault (CONSOREM-UQAC)

### 3:40 p.m. Cree Mineral Exploration Board, Cree Nation and the mining industry
Youcef Larbi (CMEB)

## WORKSHOPS

**8:30 a.m.**  Environment/mines networking (2nd edition)
Groupe MISA and Réseau Environnement

<table>
<thead>
<tr>
<th>Length: Full-day session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost: $100</td>
</tr>
</tbody>
</table>

[Room 309AB]

**1:30 p.m.**  Women and mines: Working together for a Québec action plan
Conseil d’intervention pour l’accès des femmes au travail (CIAFT)

<table>
<thead>
<tr>
<th>Length: Half-day session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost: Free</td>
</tr>
</tbody>
</table>

[Room 308A]

**1:30 p.m.**  Discussion workshop on the draft Aboriginal community consultation policy for the mining sector
Roch Gaudreau (Direction du développement et du contrôle de l’activité minière, MERN)

<table>
<thead>
<tr>
<th>Length: Half-day session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost: Free</td>
</tr>
</tbody>
</table>

[Auditorium, Exhibition room]

## ACTIVITIES

**8:30 a.m.**  Welcoming a group of students Eeyou Istchee

**9:00 a.m.**  Unveiling of new exploration targets
[Geoscientific space, Exhibition room]
Noon Lunch included with conference and exhibition pass, and served in the Exhibition room, at the heart of the action
Coupon required*
[Exhibition room]
* Certain conditions apply, see details below.

Noon Conference lunch
Social acceptability: An innovative approach focused on the future
Pierre Arcand, Minister of Energy and Natural Resources and Minister responsible for Plan Nord, and Johanne Gélinas, Partner in the Strategy and Performance Consulting Group at Raymond Chabot Grant Thornton
Cost: $85 reduced rate for Québec Mines registered participant, $125 regular rate
[Room 306B]

2:00 p.m. Seminar on mining development in the French-speaking world
[Room 308B] [QM INTERNATIONAL]

4:00 p.m. Géococktail Québec Mines - Tugliq
4:15 p.m. Book launch: Quels métaux pour demain? Les enjeux des ressources minérales
Michel Jébrak
4:30 p.m. Poetry and saga of the first mine wind generator in Nunavik
[Exhibition room]
This cocktail is financed by

* NEW FOR 2015

TUESDAY, NOVEMBER 24 AND WEDNESDAY, NOVEMBER 25

One meal (soup, a main course and a beverage) is provided per [COUPON].
You don’t have a coupon? Coupons are available for $20 each, taxes included, at the two places indicated by a [ in the exhibition hall.
If you have a conference and exhibition pass at the full rate (excludes government, prospector and student rates), or if you are a speaker or session chair
If you have a conference and exhibition pass or an exhibition pass issued after reserving a booth at the regular rate
Your coupon will be inside your name tag holder.
SUMMARY

QUÉBEC MINES

Morning
Conferences sessions
  ▸ Social acceptability seen by...
  ▸ Innovations in mine restoration
  ▸ Industrial minerals: Québec's position
EXPLO Québec Mines Challenge
Business and networking
  ▸ A partnership venture with First Nations is a unifying force!
Tour
  ▸ Québec, A City of Rock and Stone
Workshop
  ▸ Extracting new value for gold miners

Afternoon
Conferences sessions
  ▸ Social acceptability: Communications approach to establish dialogue and trust
  ▸ Energy in Mines: Act today for tomorrow’s challenges
  ▸ Mineral deposits in sedimentary environments
Workshop
  ▸ Canadian raw materials supply chain for the worldwide battery market

Evening
Book launch: Formations, métiers et professions du secteur minier
Networking Happy Hour with the First Nations. A unifying force!
CIM Gala Celebration

[QM Discovery]

Afternoon
Open house
Workshop
  ▸ Mining development jobs and the required skills
## ECONOMY, ENVIRONMENT AND SOCIETY

### SOCIAL ACCEPTABILITY SEEN BY...

**Chairs:** Mireille Goulet (Environmental and Social Responsibility Society) and Pierre Renaud (McCarthy Tétrault)

[Room 301]

- **9:00 a.m.** Introduction to the plenary session and presentation of speakers
- **9:15 a.m.** Simon Thibault, Director Environmental and Social Responsibility, Nemaska Lithium
- **9:30 a.m.** Jean-François Verret, Director Capital Projects and Exploration Mine Raglan, Glencore
- **9:45 a.m.** Raphaël Picard, former Chief of Conseil des Innus de Pessamit
- **10:00 a.m.** Manon Cyr, Mayor of Chibougamau
- **10:15 a.m.** Philippe Bourke, General Manager, Regroupement national des conseils régionaux de l’environnement du Québec
- **10:30 a.m.** Discussion of the issues with the audience
- **11:20 a.m.** Conclusion

## MINE OPERATIONS

### INNOVATIONS IN MINE RESTORATION

**Chairs:** Nathalie Tremblay (AMQ) and Sophie Trudel (MERN)

[Room 302]

- **9:00 a.m.** Tailings: The state of R and D in Canada
  Serge Delisle (CNRC)
- **9:25 a.m.** Title to come
- **9:50 a.m.** Choosing restoration concepts for restoring the abandoned New Calumet mine site
  Martine Paradis (MERN)
- **10:15 a.m.** Waste management – From concept to rehabilitation:
  Case of the Éléonore Mine, Goldcorp
  Martin Duclos (Goldcorp, Éléonore)
- **10:40 a.m.** Update on rehabilitation work at Mont Polley
  C.D. (Lyn) Anglin (Imperial Metals Corporation)

**Keynote speaker**
GEOLOGY AND EXPLORATION

INDUSTRIAL AND HIGH-TECH MINERALS AND METALS: QUÉBEC’S PLACE

Chairs: Bernard Lapointe (consultant) and Benoit Lafrance (Focus Graphite)
[Room 303]

9:00 a.m.  Introduction
Bernard Lapointe (Session Co-Chair)

9:10 a.m.  The financing of industrial and high-tech minerals and metals projects
Michel Champagne (SIDEX)

9:35 a.m.  The lithium-ion battery revolution and the raw materials that will drive it
Andrew Miller (Benchmark Mineral Intelligence)

10:00 a.m.  From exploration to processing: Example of the Lac Knife graphite mine project and industrial processing project of Focus Graphite
Benoit Lafrance (Focus Graphite)

10:45 a.m.  Apatite and ilmenite in Québec: World-class potential
Stéphanie Lavaure (Arianne Phosphate)

11:10 a.m.  Rare earths: From ore to applications
Alain Rollat (Global Business Unit Special Chem – Solvay Group)
   
   Keynote speaker

ECONOMY, ENVIRONMENT AND SOCIETY

SOCIAL ACCEPTABILITY: COMMUNICATIONS APPROACH TO ESTABLISH DIALOGUE AND TRUST

Chairs: Jean Lacroix (Réseau Environnement) and Pierre-Philippe Dupont (Royal Nickel Corporation)
[Room 301]

2:00 p.m.  Presentation of the opinion poll on Québec’s mining industry
David Coletto (Abacus Data)
2:30 p.m. Round table on approaches to communication and understanding to improve the public’s perception of the mining industry
Guy Bourgeois (Parliamentary assistant to the Minister of Energy and Natural Resources and Minister Responsible for the Plan Nord)
Josée Méthot (Association minière du Québec)
Valérie Fillion (Association de l’exploration minière du Québec)
Cédric Bourgeois (Transfert Environment and Society)
Stéphanie Yates (Chair of Public Relations and Marketing Communications, UQAM)

MINE OPERATIONS

ENERGY IN MINES: ACT TODAY FOR TOMORROW’S CHALLENGES

Chairs: Martin Coté (RNCan) and Jacek Parasyczak (UL)

[Room 302]

2:00 p.m. Future energy options for mines in a context of technology development and a volatile commodities market
Ilya Kogan (GE Solutions Minières)

2:30 p.m. Vent optimization at Éléonore
Fabien Miller (Simsmart)

3:00 p.m. Natural gas for all, everywhere!
Denis Larivée (Stolt LNGaz)

3:30 p.m. Introducing hydrogen into mines
Dr. Marc Bétournay and Martin Côté (CanmetMINES, Natural Resources Canada)

GEOLOGY AND EXPLORATION

MINERAL DEPOSITS IN SEDIMENTARY ENVIRONMENTS

Chairs: Michel Malo (INRS) and Michel Jébrak (UQAM)

[Room 303]

2:00 p.m. Gold in Rhyacian terrigenous detrital metasediments
Marc Bardoux (Barrick Gold Corporation)

2:25 p.m. Gold exploration in Archean metasedimentary rocks: Constraints and tools derived from applied metamorphic petrology
Peter H. Thompson (Thompson Geological Consulting) and Marc Bardoux (Barrick Gold Corporation)
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:50 p.m.</td>
<td>The Éléonore mine: A metamorphosed world-class gold deposit, hosted in wackes (&lt;2675 Ma), Eeyou Istchee Baie-James, Québec, Canada</td>
<td>Arnaud Fontaine (INRS-ETE), Benoît Dubé (GSC-Q), Michel Malo (INRS-ETE), Vicki McNicoll (GSC-O), Tony Brisson, Eric Fournier (Goldcorp, Éléonore) and Jean Goutier (MERN)</td>
</tr>
<tr>
<td>3:15 p.m.</td>
<td>Geology of gold mineralization associated with Canadian Shield banded iron formations: Example of the world-class Musselwhite (Ontario) and Meadowbank (Nunavut) deposits</td>
<td>Sébastien Castonguay (GSC-Q), William Oswald (INRS-ETE), Vivien Janvier (INRS-ETE), Benoît Dubé, Patrick Mercier-Langevin (GSC-Q), Vicki McNicoll (GSC-O) and Michel Malo (INRS-ETE)</td>
</tr>
<tr>
<td>3:40 p.m.</td>
<td>Orogenic gold mineralization in sedimentary rocks: Example of deposits in the Otago district of New Zealand and their genetic implications</td>
<td>Damien Gaboury (UQAC-LAMEQ)</td>
</tr>
<tr>
<td>4:05 p.m.</td>
<td>New developments in Appalachian metallogeny</td>
<td>Georges Beaudoin (UL) and Michel Malo (INRS-ETE)</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>Panel on the mineral potential of sedimentary rocks in Québec</td>
<td>Guests: Marc Bardoux (Barrick Gold Corporation), Georges Beaudoin (UL), Damien Gaboury (UQAC-LAMEQ)</td>
</tr>
</tbody>
</table>

**WORKSHOPS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Organizer</th>
<th>Details</th>
</tr>
</thead>
</table>
| 8:30 a.m.| Extracting new value for gold miners                                                              | National Research Council Canada                                                                               | Length: Half-day session  
Cost: $25  
[Room 309B] |
| 1:00 p.m.| Mining development jobs and the required skills: How to feature your skills and find employment in the mining sector | Comité sectoriel de main-d’œuvre de l’industrie des mines                                                                 | Length: 1 hour  
[Room 307B] [QM Discovery] |
| 1:30 p.m.| Canadian raw materials supply chain for the worldwide battery market                              | National Research Council Canada                                                                               | Length: Half-day session  
Cost: $25  
[Room 309B] |
TOUR

10:00 a.m.  Québec, a city of rock and stone: Parliament Hill
Length: 2 hours
Registration required, guide book included
[Main Hall, departure in front of the registration desk]

ACTIVITIES

8:00 a.m.  EXPLO Québec Mines Challenge

9:30 a.m.  A partnership venture with First Nations is a unifying force!
First Nations of Québec and Labrador Economic Development Commission
and Aboriginal Affairs and Northern Development Canada
[Auditorium, Exhibition room]

Noon  Lunch included with conference and exhibition pass,
and served in the Exhibition room, at the heart of the action
Coupon required*
[Exhibition room]

* Certain conditions apply, see details on page 17.
This lunch is financed by ABB

Noon  Open house
Open to public
[QM Discovery]

4:00 p.m.  Book launch: Formations, métiers et professions du secteur minier
Institut national des mines
[Exhibition room]

4:30 p.m.  Networking Happy Hour with the First Nations. A unifying force!
First Nations of Québec and Labrador Economic Development Commission
and Aboriginal Affairs and Northern Development Canada
[Exhibition room]

6:30 p.m.  CIM Gala Celebration
Canadian Institute of Mining, Metallurgy and Petroleum and Association
minière du Québec
Cost: $150
[Hilton, Ballroom]
SUMMARY

QUÉBEC MINES

Morning
Conferences sessions
- Mining projects seeking new financing options
- Rock mechanics
- Magmatic Ni-Cu-PGE deposits: global prospects

Awards Ceremony
Exhibition closes at 1:00 p.m.

Afternoon
Conferences sessions
- Successful mining projects in northern territories
- Magmatic Ni-Cu-PGE deposits: Québec’s prospects and exploration tools
ECONOMY, ENVIRONMENT AND SOCIETY

MINING PROJECTS SEEKING NEW FINANCING OPTIONS

Chairs: Nochane Rousseau (PwC), Steve Boulet and André Aubin (MERN)  
(Room 301)

9:00 a.m.  Innovation in mining finance: The Osisko Gold Royalties approach  
Bryan A. Coates  (Osisko Gold Royalties)  
**Keynote speaker**

9:50 a.m.  How to support our present and future mining flagships  
Dany Pelletier  (Caisse de dépôt et placement du Québec)

10:15 a.m.  A case study of 2014 financing of the Renard project: C$1B for Québec’s first diamond mine  
Matt Manson  (Stornoway Diamonds)

10:40 a.m.  Developing the next great Canadian base metal mine  
Mark Selby  (Royal Nickel Corporation)

This session is presented by FONDS de solidarité FTQ

MINE OPERATIONS

ROCK MECHANICS

Chairs: Patrick Frenette  (Canadian Malartic Mine) and Louis Bienvenu  (MERN)  
(Room 302)

9:00 a.m.  Post-placement mechanical behaviour of mine backfill: A study of backfill-rock interactions  
Tikou Belem, Nabassé Jean-Frédéric Koupouli, Khadija El Mahboub  (UQAT)  
and Patrice Rivard  (Université de Sherbrooke)

9:25 a.m.  Studies of the interaction between backfill and host structures for more reliable barricade design  
Li Li  (École Polytechnique de Montréal)

9:50 a.m.  *In situ* stress measurement – 35 years of research at Polytechnique Montréal  
Robert Corthésy and Maria Helena Leite  (École Polytechnique de Montréal)

10:15 a.m.  Optimization of intact rock property characterization in mining projects using statistical analysis  
Catherine Boudreau, Martin Grenon and Geneviève Bruneau  (UL)

10:40 a.m.  Estimating fault-slip potential in seismically active mines  
Hani Mitri and Atsushi Sainoki  (McGill University)
11:05 a.m.  Ground control strategies for seismically active underground mines
Denis Thibodeau (Stantec)

GEOLOGY AND EXPLORATION

MAGMATIC NI-CU-PGE DEPOSITS: GLOBAL PERSPECTIVES

Chairs: Marc Constantin (UL) and Andrea Amortegui (MERN)
[Room 303]

9:00 a.m.  The formation of magmatic sulfide deposits: Have we really learned nothing new in the past 25 years?
Nicholas T. Arndt (Université Joseph Fourier, Grenoble)
[Keynote speaker]

9:50 a.m.  The mafic-ultramafic Yacouba layered complex (2.09 Ga) – Host of the next world-class base metals district in West Africa (Ivory Coast)?
Marc-Antoine Audet (Sama Nickel), Christian Picard (Université de Franche-Comté, Besançon – Université Joseph Fourier, Grenoble) and Gnamba Gouedji (Sama Nickel)

10:15 a.m.  The Nkomati Ni-Cu-Cr-PGE deposit of the Uitkomst Complex, South Africa: downward collapse of magmatic silicate-sulfide-chromite slurries into a devolatising dolomitic footwall
Wolfgang D. Maier (Cardiff University, UK), Steve Prevec (Rhodes University, South Africa), Sarah-Jane Barnes (UQAC) and Tafadzwa Gomwe (Val-d’Or)
[Keynote speaker]

11:05 a.m.  The Mesoarchean Venus Greenstone Belt in Nunavik: A komatiite succession fertile in Ni-Cu-PGE in the Northeastern Superior Province
François Huot (UL), Michel Houlé (GSC-Q), Vital Pearson and Paul Archer (Osisko Gold Royalties)

11:30 a.m.  Diversity of Ni-Cu-PGE mineralization of the Ring of Fire Intrusive Suite, Ontario: Evolution of a komatiitic feeder system
Michel Houlé (GSC-Q), C. Michael Lesher, Naghmeh Farhangi, Heather Carson (MERC-LU), Riku Metsaranta (OGS), Vicki McNicoll (GSC-Q) and Anne-Aurélie Sappin (GSC-Q /UL)
SUCCESSFUL MINING PROJECTS IN NORTHERN TERRITORIES

Chairs: André Gaumond (Osisko Gold Royalties) and Alain Vigneault (MERN)

[Room 301]

1:30 p.m.  Agnico Eagle in the Canadian Arctic
Guy Gosselin (Agnico Eagle Mines)

Keynote speaker

2:20 p.m.  Renard project challenges
Patrick Godin (Stornoway Diamonds)

2:45 p.m.  James Bay exploration: Some ingredients for success
Mathieu Savard (Osisko Gold Royalties)

3:05 p.m.  Éléonore – Past and present
Martin Duclos (Goldcorp, Éléonore)

GEOLOGY AND EXPLORATION

MAGMATIC NI-CU-PGE DEPOSITS: QUÉBEC’S PERSPECTIVES AND EXPLORATION TOOLS

Chairs: Michel Houlé (CGC) and Mona Baker (MERN)

[Room 303]

1:30 p.m.  Magmatic Ni-Cu-PGE mineralization in Canada: A spectrum of ages and magmatic, volcanic, and tectonic settings
C. Michael Lesher (MERC-LU) and Michel Houlé (GSC-Q)

Keynote speaker

2:45 p.m.  Using geochemistry as a vector to Ni-Cu-PGE mineralization in the Labrador Trough, Nuvavik, Québec: Case study from the Idefix property
Ian Bliss and Christine Vaillancourt (Northern Shield Resources)

2:50 p.m.  Trace element contents of sulfides and oxide minerals from magmatic ore deposits: Implications for petrogenesis and exploration
Sarah-Jane Barnes (CRCMM–UQAC)

Keynote speaker

3:40 p.m.  Nickel on the move: Generation of high-Ni sulphide and alloy phases during serpentinization at the Dumont sill, Québec
Michelle Sciortino (Royal Nickel Corporation), Jim Mungall (University of Toronto) and Johnna Muinonen (Royal Nickel Corporation)

4:05 p.m.  Ni-Cu ± PGE showings in the Portneuf-Mauricie Domain of the Grenville Province (Québec): An example of a typical mineralization in a Proterozoic island arc
Anne-Aurélie Sappin, Marc Constantin (UL) and Thomas Clark (URSTM-UQAT)
ACTIVITY

11:30 a.m.  Awards Ceremony
▶ AQUEST scholarships
▶ Québec Mines EXPLO Challenge
▶ Le marteau d’or (Golden Hammer)
▶ Outstanding Merit Award

[Exhibition room]

This activity is financed by

Fonds de recherche Nature et technologies
Québec

FONDS de solidarité FTQ

FORACO

GÉOTECH EXPLORATION
2055 DUDEMAIN
MONTRÉAL, QUÉBEC H3M 1R3

SIDEX

SODÉMEX
EXHIBITORS

48° Nord International 30
Abitibi Geophysics 37
Abitibibcppress 124
Acier MYK 120
AOGAT Laboratories 93
Ariane Phosphate 78
Association paritaire santé et sécurité du secteur minier 74
Béton préfabriqué du Québec 30
Béton Provincial 104
Boart Longyear 58
Bonterra Resources 98
Bureau d’audiences publiques sur l’environnement 41
Canadian Institute of Mining, Metallurgy and Petroleum 99
Castech - Plessite Group 47
Cégep de l’Abitibi-Témiscamingue 9
Cégep de Sept-Îles 14
Centre de formation professionnelle de la Baie-James 33
Centre de formation professionnelle de Val-d’Or - National Mining Center 27
Centre de technologie minérale et de plasturgie 59
Ceramic Technology 23-24
CFP Mont-Laurier 35
Chrysler RAM 15-18
Comité sectoriel de main-d’œuvre de l’industrie des mines 84
Commerce Resources 60
Commission scolaire des Trois-Lacs 50
Conseil d’intervention pour l’accès des femmes au travail 86
CONSOREM 69
Construnet 12
Corem 76
Corporation de développement économique montagnaise 123
Cree Mineral Exploration Board 79
Deswik 2
Discovery Int’l Geophysics 13
Divex 68
Doppelmayr Canada 140
Draeger Safety Canada 20-21
ELEMISSION 51
Filtrartech 131
First Nations Human Resources Development Commission of Quebec 132
First Nations of Quebec and Labrador Economic Development Commission 125
Gaztek 48
GéoMégA Resooures 44
Glencore 62
Government of Newfoundland and Labrador - Natural Resources 94
Helios Group, Utilities and facilities management services 28
Honco Group 87
Institut national des mines 82-83
IO5 Services géoscientifiques 55-56
Kebechem 42-43
Mabarex 96
Magazine Ressources Mines et Industrie [Groupe Tertio] 112
Matamec Explorations 11
Minautor scp 89 121-122
Mine Arnaud 36
Missions commerciales de l’Université Laval 5
Multi Options Nursing 25
National Research Council of Canada 123
Nemaska Lithium 119
NJ Albert Télécommunications 109
Nunavik Mineral Exploration Fund 80
Osisko Gold Royalties 130
Park’N Fly Montréal 91
Pesca Environnement 114
Point Natural Resources (the) 97
Pro Contact informatique 8
Pro Metal Plus 1
Prospectors and Developers Association of Canada 110
Puribec Technologies 105
Québec Geoscience Centre [NRCan-INRS] 111
Quebec Mineral Exploration Association 115
Québec Mining Association 81
RB Global Management & Safety 12
Rogers Electric Motor Service 129
Royal Nickel 40
SDV Logistics Canada 63
Services A.P. Guay 4

Exhibition room maps and exhibitors
GOVERNMENT HUB
Commission de la santé et de la sécurité du travail
Institut de la statistique du Québec
Ministère de l’Économie, de l’Innovation et des Exportations
Ministère de l’Énergie et des Ressources naturelles
  ▸ Direction générale de Géologie Québec
  ▸ GESTIM/SIGÉOM
  ▸ Direction générale du développement de l’industrie minière
  ▸ Direction générale de la gestion du milieu minier
  ▸ Direction générale des ressources humaines et des ressources informationnelles
Ministère des Finances
Ministère des Forêts, de la Faune et des Parcs
  ▸ Direction de la biodiversité et des maladies de la faune
  ▸ Direction de la faune aquatique
Ministère de la Santé et des Services sociaux
Ministère des Transports du Québec
Secrétariat aux affaires maritimes
Société du Plan Nord

PROSPECTOR SPACE
Association des prospecteurs du Nord du Québec P1
Association des prospecteurs de la Mauricie P2
Jean-Louis Tremblay, prospector P3
Gaston St-Pierre, prospector P4
Association des prospecteurs de la Haute-Côte-Nord P5
Gilles Bouchard, prospector P6
Edwin Gaucher, prospector P7
Olivier Ayotte, prospector P8
Marc Bouchard, prospector P9
Denis Bouchard, prospector Horizon03@oricom.ca P10

KNOWLEDGE LOUNGE
Canada research chair in Magmatic ore deposits
Chaire en entrepreneuriat minier UQAT-UQAM
E4m - Centre de recherche sur la géologie et l’ingénierie des ressources
NSERC - Agnico Eagle Industrial Research Chair in Mineral Exploration
Research Institute on Mines and Environment (RIME) UQAT-Polytechnique
Social Responsability and Sustainable Development Research Chair
G01 Plaque for distinguished geologists

G02 Marteau d’or

G03 Charlevoix - a region sculpted by the skies above?
Jean-Michel Gastonguay (Observatoire de l’Astroblème de Charlevoix) and Pierre Verpaëlst (Observatoire de la Géosphère de Charlevoix)

G04 Geoparks: What are they for?
Pierre Verpaëlst (Observatoire de la Géosphère de Charlevoix)

G05 Outstanding geological sites
Dominique Richard (MERN)

G06 Association québécoise des sciences de la Terre (AQUEST)

G07 Field school

G08 Sustainable development
Pénélope Burniaux (MERN)

G09 New publications at the Ministère de l’Énergie et des Ressources naturelles – 2015

G10 2015–2016 programming – Geoscience studies

G11 2015–2016 programming at the Bureau de la connaissance géoscientifique du Québec (BCGQ)

G12 New targets for mineral exploration – 2015 geoscience projects
Mehdi A. Guemache (MERN)

G13 The Québec Stratigraphic Lexicon – An essential tool for the geoscience community
Ghyslain Roy and Mona Baker (MERN)

G14 Geological compilation of the Rivi è re Patapédia region, Bas-Saint-Laurent
Robert Thériault, Claude Dion and Charles St-Hilaire (MERN)

G15 Geology of the Appalachians of Québec: Southwest map sheet – Regions of Montérégie, Cantons-de-l’Est, Centre-du-Québec and Chaudière-Appalaches
Alain Tremblay, Stéphane de Souza, Morgann Perrot (UQAM) and Robert Thériault (MERN)

G16 Tectonometamorphic evolution of the Opinaca and La Grande subprovinces of the Superior Province, Québec: Advances in thermobarometry and geochronology
Antoine Rhéaume Ouellet, Carl Guilmette [UL], Jean Goutier [MERN], François Huot [UL] and Matthijs Smit (UBC)

G17 Gold mineralization of the Orfée orogenic gold deposit, Eeyou Istchee James Bay Territory
Adina Bogatu, François Huot [UL], Jean Goutier [MERN], Carl Guilmette, Antoine Rhéaume Ouellet, Georges Beaudoin [UL] and Don Davis (UToronto)

G18 Classification of gold occurrences near the contact between the La Grande and Opinaca subprovinces, south of the La Grande 3 Reservoir, Eeyou Istchee James Bay Territory
Roman Hanes, François Huot [UL], Jean Goutier [MERN], Philippe Drouin, Georges Beaudoin and Carl Guilmette (UL)

G19 Study on the tectonometamorphic setting of the Laguiche Complex, Eeyou Istchee James Bay Territory
Myriam Côté-Roberge, Carl Guilmette [UL], Jean Goutier (MERN) and Nathan Cleven (UL)

G20 Progressive polyphase deformation between the northeastern La Grande and Opinaca subprovinces of the Superior craton: Preliminary field results from the Lac Joubert region
Nathan Cleven (UL), Pénélope Burniaux, Hanafi Hammouche (MERN), Antoine Rhéaume Ouellet [UL], Lyal Harris (INRS-ETE), Jean Goutier (MERN) and Carl Guilmette (UL)

G21 Study of the structure and metamorphism of the Attic Complex [Phase 2]: Lac Parent region – Josselin Pluton, Québec
Nicolas Revelle, Sacha Lafrance and Alain Tremblay (UQAM)

G22 Gold mineralization and deformation of the Malartic Lake Shore showing, Abitibi Subprovince, Québec
Francis Guay (UQAC), Pierre Pilote (MERN) and Réal Daigneault (CERM-UQAC)

G23 Structural, geochemical and petrographic characterization of the contact between the Caste and La Motte-Vassan formations: Lac Malartic–Manneville South Fault, Abitibi, Québec
Florence Bédard (UQAM), Pierre Pilote and Pierre Lacoste (MERN)
G24 Lithological characteristics of the Piché Group and implications on its origin, Abitibi, Québec
Pierre Bedeaux (UQAC), Pierre Pilote (MERN), Silvain Rafini (CONSOREM) and Réal Daigneault (UQAC)

G25 Geology of the Malartic Group and adjacent volcano-sedimentary groups: Overview and outlook
Pierre Pilote, Pierre Lacoste, Jean David (MERN), Réal Daigneault (UQAC) and Vicki McNicoll (CGC-O)

G26 Geology of surficial deposits south of Lac Mistassini, Québec: Preliminary results
Mohamed El Amrani (MERN) and Antoine Archambault (UL)

G27 Drift prospecting in the Lac Evans area, James Bay region: Till sampling and Quaternary deposit mapping (NTS 32K10, 32K11, 32K14, 32K15, 32N02 and 32N03) – Preliminary results
Olivier Lamarche (MERN) and Éric Leduc (UQAM)

G28 Geology and economic potential of the southwestern Lac Nemiscau region, Lac Rodayer area (NTS 32K13, 32K14, 32N03 and 32N04-SE)
Daniel Bandyayera (MERN), Yannick Daoudene (UGAT) and Simon Bourassa (MERN)

G29 Geological and structural context of the Lac Joubert region, Eeyou Istchee James Bay Territory
Pénélope Burniaux, Hanafi Hammouche (MERN) and Nathan Cleven (UL)

G30 Geology of the Lac Villaret region, Eeyou Istchee James Bay Territory: Shedding new light on the Opinaca
Jean Goutier (MERN), Joséphine Gigon (URSTM) and Myriam Côté-Roberge (UL)

G31 Presentation of geophysical data published in 2015
Rachid Intissar and Siham Benahmed (MERN)

G32 Geology of the Lac à l’Eau Jaune region [NTS 32G10]
François Leclerc, Francis Talla Takam and Mehdi A. Guemache (MERN)

AND

VMS exploration in the Chibougamau region: Recent work and exploration targets
François Leclerc, Patrick Houle (MERN), Pierre-Simon Ross (INRS-ETE), Jean Laforest (Les Ressources Tectonic) and Claude Larouche (Ovalbay Geological Services)

G33 Aggregate resource inventory in the Puvirnituq and Akulivik areas
André Brazeau (MERN)

G34 Status of new geoscience compilations in Québec
Pierre Lacoste, Ghyslain Roy, Simon Auclair, Mona Baker, Charles St-Hilaire, Julie Vallières, N’golo Togola, Nathalie Bouchard, Ricardo Escobar and Jean Marie Nzenguée (MERN)

G35 Geoscientific map symbols and abbreviations
Ghyslain Roy (MERN)

G36 Major geological subdivisions in Québec
Ghyslain Roy (MERN)

G37 Characterization of mafic and ultramafic sills in the Gerido Zone in the Lacs Qamaniik region, Labrador Trough, Nunavik, Québec
Marie-Pier Bédard (UL), Michel Houlé (GSC-Q) and François Huot (UL)

G38 Petrologic and mineralogical observations from the Ovoid ore body – Viosey’s Bay Ni-Cu sulfide deposit, Canada – Implications for the formation of the ore body
Luiz Felipe Salim Amaral, Sarah-Jane Barnes and Philippe Pagé (UQAC)

G39 Re-Os isotopic signature of laurite inclusions in chromites from Stillwater (Montana, USA) and identification of interstitial PGE-enriched phases
Laurène-Marie Wavrant, Sarah-Jane Barnes, Philippe Pagé (UQAC), Norman Pearson and William L. Griffin (ARC National Key Centre for Geochemical Evolution and Metallogeny of Continents - GEMOC)

G40 Trace elements in magmatic sulfides as petrogenetic indicator and exploration tool: What have we learned from massive sulfides of the Lac des Iles Pd-deposits (Ontario, Canada)?
Charley J. Duran, Sarah-Jane Barnes (UQAC) and John T. Corkery (NAP)

G41 The effect of chromite crystallization on Os, Ir, Ru and Rh fractionation in sulphide-undersaturated picritic magmas: An example from the Emeishan Large Igneous Province, Southwest China
Jean-Philippe Arquin, Philippe Pagé, Sarah-Jane Barnes (UQAC), Song-Yue Yu and Xie-Yan Song (SKLQDG)
Mineralogical characterization of platiniferous showings in the Lac Lacasse and Lac Thévenet regions, northern Labrador Trough

Cynthia Brind’Amour-Côté (FEMN), Michel Houlé (GSC-Q) and François Huot (UL)

The Lac Soisson intrusive Suite: a potential extension of the Nain plutonic Suite in the western Core Zone

David Corrigan, Natasha Wodicka (GSC-O), Isabelle Lafrance, Carl Bilodeau and Daniel Bandyayera (MERN)

Sampleu and Yepleu deposits of the Yacouba mafic-ultramafic layered complex (Ivory Coast): A new type of Ni-Cu and PGM sulphide deposit?

Christian Picard (Université de Franche-Comté, Besançon et Université Joseph Fourier, Grenoble), Franck Gouédji and Marc Antoine Audet (Sama Nickel-CI SARL, Abidjan, Côte d’Ivoire)

Geological synthesis and mineral potential assessment of the Route 167 corridor

Ludovic Bigot, Stéphane Faure (CONSOREM) and Réal Daigneault (UQAC-CONSOREM)

Quantifying hydrothermal alteration: Methods and data

Lucie Mathieu (CONSOREM), Sylvain Trépanier (Osisko, CONSOREM), Stéphane Faure (CONSOREM) and Réal Daigneault (UQAM)

Geochemoical characterization of orogenic gold indicator minerals and glacial sediments in the Val-d’Or region, Québec

Donald Grzela, Georges Beaudoin and François Huot (UL)

Preliminary results: Orogenic gold deposit indicator minerals

Marjorie Sciuba, Georges Beaudoin and François Huot (UL)

Rare earth characterization of apatites from the Lac à Paul P-Ti deposit, Lac-Saint-Jean Anorthosite Suite

William Chartier-Montreuil, Sarah Dare (UOttawa-UQAC), Sarah-Jane Barnes (UQAC) and Ross Stevenson (UQAM)

Gold trough time in the Val-d’Or district: From Meso-Archean to late Proterozoic!

Christian Sasseville, Michel Jébrak (ICEM, UQAM), Ross Stevenson (GEOTOP, UQAM), André Poirier (GEOTOP) and Lucille Daver (UQAM)

Tourmaline-pyrite assemblages in gold mineralization at the Lameque mine area, Val-d’Or, Québec

Lucille Daver, Christian Sasseville and Michel Jébrak (UQAM)

A non-plate tectonic model for the Yilgarn Craton, Western Australia – Exploration implications and comparisons with the Superior Craton, Canada

Lyl B. Harris (INRS-ETE) and Jean H. Bédard (GSC-Q)

Hypercube ®: A new mineral potential assessment tool

Éric Larouche (UQAC), Guillaume Allard (MERN), Réjean Girard, Clément Dombrowski (IOD Services Géoscientsifiques) and Réal Daigneault (CERM-UQAC)

Characterization of a metamorphosed mafic-ultramafic layered intrusion, Core Zone, Southeastern Churchill Province, Nunavik

Pierre-Hugues Lamirande, François Huot, Carl Guilmette (UL), Carl Bilodeau (MERN), David Corrigan and Vicki McNicoll (GSC-O)

Detrital provenance analysis in the north of the Labrador Trough, Quebec-Canada: Contributions from geochemistry of metasediments, U-Pb dating of detrital zircons and Sm-Nd analysis

Renato Henrique-Pinto, Carl Guilmette (UL), Carl Bilodeau(MERN), David Corrigan, Vicki McNicoll (GSC-O) and Marc Constantin (UL)

An orbicular gabbro in the Labrador Trough

Simon Nadeau (UQAC) and Carl Bilodeau (MERN)

Southeastern Churchill transect: Tectonometamorphic evolution and geodynamic implications

Antoine Godet, Carl Guilmette (UL) and Loïc Labrousse (Université Pierre-et-Marie-Curie)

Crustal growth history of the Core Zone: New U-Pb zircon constraints from the GEM-II Hudson-Ungava project

David Corrigan, Natasha Wodicka (GSC-O), Chris McFarlane (UNB), Isabelle Lafrance, Daniel Bandyayera and Carl Bilodeau (MERN)
G60 Interpretation of new aeromagnetic data and implications for geothermal power from a suite of radiogenic units beneath the Appalachian sedimentary cover
Aurélie Gicquel, Lyal Harris (INRS-ETE) and Pierre-Arthur Groulier (Memorial University of Newfoundland)

G61 New geological data on the Escoumins volcano-sedimentary belt and its surroundings [NTS 22C05, 22C06 and 22C11]
Pierre-Arthur Groulier, Aphrodite Indares, Greg Dunning (Memorial University of Newfoundland), Abdelali Moukhsil (MERN) and Lyal Harris (INRS-ETE)

G62 Strategic metal resources for the 21st century: The natural and anthropological metal cycle
Laurie Wolff, Michel Cathelineau and Anne-Sylvie André-Mayer (Université de Lorraine, France)

G63 REE transfer from the mantle to the birch tree: An example from the Proterozoic Grenville Province (Québec)
Laure Giambérini and Anne-Sylvie Andrén-Mayer (Université de Lorraine, France)

G64 Rare earth occurrences related to late peraluminous pegmatites, Grenville Province, Québec
François Turlin (Université de Lorraine, France), Abdelali Moukhsil (MERN), Félix Gervais (Polytechnique Montréal), Fabien Solgadi (MERN), Anne-Sylvie André-Mayer (Université de Lorraine, France), Olivier Vanderhaeghe (Université Toulouse III Paul Sabatier, France), Armin Zeh (Institut für Geowissenschaften, Frankfurt, Allemagne) and Daniel Ohnenstetter (Université de Lorraine, France)

G65 Impact of an anorthositic pluton on the structure of an orogenic conduit in the Parautochthonous belt to the southwest of the Manicouagan Reservoir, central Grenville Province, Québec
Sophie Jannin, Félix Gervais (Polytechnique Montréal) and Abdelali Moukhsil (MERN)

G66 Origin of the sillimanite-bearing quartzo-feldspathic rocks of Lac Manouane (Grenville Province, La Tuque, Québec)
Pierre-Henri Trapy, Félix Gervais (Polytechnique Montréal), Louise Corriveau (GSC-Q) and Abdelali Moukhsil (MERN)

G67 Geology of the Clova area, Western Grenville, Québec [NTS 31O11, 31O12, 31O13, 31O14, 32B03 and 32B04]
Abdelali Moukhsil, Fabien Solgadi (MERN), Said Belkacim and Thomas Clark (URSTM-UQAT)

G68 Geology and economic potential of the Lac Jeannin region, Southeastern Churchill [NTS 24B]
Isabelle Lafrance (MERN) and Benoit Charrette (MERN)

G69 The geological potential of limestone, dolomite and marble in Québec
N’golo Togola (MERN)

G70 Geology and economic potential of the northern part of the Labrador Trough and the Rachel-Laporte Zone, Kuujjuaq region [NTS 24K]
Carl Bilodeau (MERN)

G71 Geology of surficial deposits in the Southeastern Churchill Province: Preliminary results of the 2012–2015 sampling and mapping programs
Hugo Dubé-Loubert, Virginie Daubois (MERN) and Martin Roy (UQAM)

G72 Drift prospecting in the Clova area, Western Grenville Province [NTS 31O13, 31O14, 32B03 and 32B04]
Virginie Daubois (MERN)

G73 Architectural stone in the regions of Estrie [Saint-Sébastien], Mauricie [Saint-Alexis-des-Monts], Saguenay-Lac-Saint-Jean, Capitale-Nationale (Laurentides Wildlife Reserve) and Gaspésie
N’golo Togola and Ricardo Escobar (MERN)

G74 Technological applications of high-purity quartz
Dominic Fragasso and Denis Blackburn (MERN)

G75 Characterization of Ni-Cu mineralization in the Soisson Suite showings, southeastern Churchill Province, Québec
Jean-Philippe Fleury (UQAM)

G76 Petrographic and geochemical characterization of alkaline rocks of the Fayot Suite, Churchill Province
Marie-Odile Chartier, Philippe Pagé (UQAC), Isabelle Lafrance and Benoit Charrette (MERN)

G77 Nature and origin of rocks belonging to the mafic-ultramafic Nuvulialuk Suite, Southeastern Churchill Province, Québec: Petrologic and geochemical characterization and implications for regional geology
Rocio Pedreira Perez, Philippe Pagé (UQAC), Daniel Bandyayera (MERN) and Sarah-Jane Barnes (UQAC)
Thermobarometric study of the Rachel-Laporte Zone: Is the metamorphism distinct from the Core Zone?
Marc-Antoine Vanier (UL)

From auriferous fenitization to orogenic mineralization in a synvolcanic pluton: Example of the Boyvinet Stock in the Lac Shortt region
Édouard Côté-Lavoie, Damien Gaboury (UQAC-LAMEQ) and Laury Schmitt (SOQUEM)

Vectorial interpretations of multiparameter data at the VMS Bracemac-McLeod deposit, Matagami mining district, Québec
Nathalie Schnitzler, Alexandre Bourke, Pierre-Simon Ross (INRS-ETE), Robert Boucher and Robert Namour (Glencore)

Evaluation of thermal properties of SLL sedimentary basin: measurements in laboratory and well logs approach
Maher Nasr, Jasmin Raymond and Michel Malo (INRS-ETE)

Geochemistry of basalts hosting the auriferous Lalor VMS deposit, Snow Lake, Manitoba
Vincent Dubé-Bourgeois, Pierre-Simon Ross (INRS-ETE), Patrick Mercier-Langevin (GSC-Q) and Antoine Caté (INRS-ETE)

Highlights of advanced exploration and mining development in the Abitibi-Témiscamingue in 2015
Pierre Doucet and Jeanne Lavoie-Deraspe (MERN)

Lightning strikes: A new exploration tool?
Patrick Houle (MERN)

Projects at the deposit appraisal or mine development phase

Active mines

Automated identification of drill core texture patterns for geometallurgical applications
Laura Pérez-Barnuevo, Sylvie Lévesque (COREM), Claude Bazin (UL), Daniel Michaud (COREM) and Hugues Longuepée (ArcelorMittal Mines Canada)

Comparative study of sample preparation techniques and rare earth element analytical methods in different environmental and mineral matrices
Laurence Whitty-Léveillé, Keven Turgeon, Dominic Lariviére and Claude Bazin (UL)

Rare earth elements (REE) extraction from silicate ores
Jean-François Boulanger, Laurence Whitty-Léveillé, Keven Turgeon, Claude Bazin and Isabelle Bombard (UL)

Solvent extraction applied to rare earth element separation
Keven Turgeon, Claude Bazin, Jean-François Boulanger, Laurence Whitty-Léveillé and Dominic Lariviére (UL)

The three facets of metallurgy
Denis Blackburn (MERN)

Geo-environmental characterization and modelling of a mining project at the deposit appraisal stage applied to a Cu-Au deposit
Denys Vermette, Isabelle Demers, Mostafa Benzaazoua (UQAT-IRME) and Raphaël Mermillod-Blondin (Mines Agnico Eagle)

Development of a predictive kinetic method for contaminated neutral drainage using complexing agents: Project implementation and preliminary results
Maude Lévesque Michaud, Benoît Plante and Bruno Bussière (UQAT-IRME)

Evaluation of covers with capillary barrier effects composed of desulphurized tailings to control acid mine drainage in northern conditions
Fannie Lessard, Bruno Bussière (UQAT), Jean Côté (UL), Mostafa Benzaazoua (UQAT) and Louis Marcoux (Glencore, Raglan Mine)

Physico-chemical qualities of groundwater in the vicinity of the Marban site: State of the area before NioGold began mining
Patrick Vuatu Ibulu Mambenga, Abdelkabir Maqsoud, Benoît Plante, Mostafa Benzaazoua (UQAT) and Yan Ducharme (NioGold Corporation)

Hydrogeology in the mining development process
Jacinthe Paquet (MERN)

Environmental geochemistry of gallium
Antony Laberge, Charles Gobeil and André Tessier (INRS-ETE)

Peat bog restoration: A full-scale example at Saint-Fabien-sur-Mer
Geneviève Potvin and Stéphanie Boudreau (Association des producteurs de tourbe horticole du Québec)
Université de Sherbrooke: Partner in mine site revegetation without prior preparation of the site
Sébastien Roy (UdeS)

Preliminary characterization of the electrical resistivity of sensitive clays in Brownsburg, Québec
Karine Bélanger (MTQ), Ariane Locat, Richard Fortier (UL), Denis Demers (MTQ), Majid El Baroudi (UL) and Andrée-Anne Fortin-Rhéaume (MTQ)

Towards a better understanding of the social acceptability of mine projects
Philippe Angers and Corinne Gendron (UQAM)

A collaborative scenario construction method that promotes the social acceptability of mining projects
Roxanne Lavoie (UL)

Impacts of climate change on storm regimes and extreme sea levels in the Hudson Bay and James Bay region
Jean-Pierre Savard (Ouranos)

Towards adaptation: Synthesis of knowledge on climate change in Québec
Robert Siron et Liza Leclerc (Ouranos)

Preliminary assessment of the potential for geothermal electric power in the Matapedia Valley and the Gaspé region
Anne Chabot Bergeron (UL), Michel Malo, Jasmin Raymond and Félix-Antoine Comeau (INRS-ETE)

The ITRAX Core Scanner: A non-destructive tool for the chemostratigraphic analysis of drill cuttings and core by microscopic x-ray fluorescence (XRF)
Arnaud De Coninck and Pierre Francus (INRS-ETE)

GT 2014-03 : L’Astroblème de Charlevoix
GT 2015-01 : Les Montérégiennes
GT 2014-02 : Les minéraux, leur composition et leur utilisation quotidienne
AND
GT 2013-04 : Minéraux du Québec
GT 2012-03 : Les métaux et les minéraux dans notre vie
GT 2011-03 : Le volcanisme et ses vestiges au Québec
THANK YOU FOR YOUR FINANCIAL SUPPORT

THE QUÉBEC MINES EXPLO CHALLENGE CONTEST

The Québec Mines EXPLO Challenge is truly a race against the clock! Teams of three students, each representing a different university, will have 12 hours to prepare an exploration project.

AQUEST SCHOLARSHIP (FOR STUDENTS)

To enter the contest, students must present a conference or display a poster on a research project carried out in Québec. Each winner will receive a certificate of excellence and a scholarship.

WELCOMING A GROUP OF STUDENTS EEYOU ISTCHEE

The Québec Mines Discovery component of the event offers to a school group from Eeyou Istchee the opportunity to discover the world of geo-sciences and mining development, thanks to the financial contribution of:
THANKS TO

ABB

First Nations of Quebec and Labrador Economic Development Commission

FONDS de solidarité FTQ

TUGLIQ

FOR YOUR FINANCIAL SUPPORT