

Metro Toronto Convention Centre, Toronto, Canada | MARCH 1 - 4, 2020

# PRELIMINARY PROGRAM

(as of November 13, 2019)



## THE WORLD'S PREMIER 2020 MINERAL EXPLORATION & MINING CONVENTION

# **HIGHLIGHTS**

March 1 - 4 Metro Toronto Convention Centre | Toronto, Canada



# **SAVE 40% — REGISTER BY FEBRUARY 7**

on an All Access Pass and individual membership at pdac.ca/convention

# **CONNECT WITH**

# ATTENDEES FROM

> Including investors, financiers, banking executives, fund managers, brokers, analysts, lawyers, mining developers, exploration managers, prospectors, geoscientists, government officials, media and more!

COUNTRIES

# **BUILD YOUR** NETWORK

AT THESE EVENTS

**BUY YOUR TICKETS EARLY** 



#### MINERAL OUTLOOK LUNCHEON | MONDAY, MARCH 2



M&A in the mining sector: The return of the mega deal, the reasons why and implications for the future

Join us as Catherine Raw, Chief Operating Officer, North America at Barrick Gold Corporation, discusses the recent spate of M&A in the gold mining sector and what it means for the mining industry as a whole.

#### OTHER NETWORKING EVENTS

Sunday, March 1 PDAC New Members Networking Reception

Sunday, March 1 Opening Day Reception Monday, March 2 Trade Show Reception

Monday, March 2 The Network - NEW RECEPTION

Student-Industry Networking Luncheon Tuesday, March 3

Tuesday, March 3 Mining for Diversity Reception

Wednesday, March 4 **Grand Finale** 



## **AWARDS GALA & AFTER PARTY**

TUESDAY, MARCH 3

The PDAC Awards Gala celebrates excellence in the global mining industry, and is the ideal place to host your clients and network with key players. Enjoy drinks on arrival, followed by a sumptuous threecourse gourmet dinner and fine wines.

Then... it's on to the AFTER PARTY!

Your opportunity to rub shoulders with Award recipients, C-level executives, financiers, brokers and mining developers. Enjoy two complimentary drink tickets and a great party atmosphere—the perfect backdrop for unlimited networking!



# **KEYNOTE PROGRAM: DISCOVERIES OF THE 21ST CENTURY**

MONDAY, MARCH 2

Exploration success has been declining since the start of the 21st century. However, key tier one deposits have been discovered and put into production. Three industry leaders will outline how this was possible, what were the keys to success and what are the keys for discovery in the future.

Finding and building worldclass in different continents



Mark Bristow
Barrick Gold Corporation

Brucejack Mine: From discovery to production



**Joe Ovsenek**Pretium Resources Inc.

Ivanhoe Mines is delivering the triple crown of Southern Africa's mining future



**Robert Friedland** Ivanhoe Mines Ltd.

# **SHORT COURSES**

Register for in-depth, educational courses led by industry experts. A certificate of completion is available towards your professional development hour requirements.

Fundamentos de estimación de recursos minerales (Instruction in Spanish only)

# VALUABLE INVESTING INSIGHTS

FROM INDUSTRY
THOUGHT LEADERS IN
THE MINERALS AND
MINING SECTOR

- > Building an investor toolkit:
  Practical tips seminar
  Get practical tips on how to start investing in the mineral industry and increasing the odds of making money on investments.
- Corporate Presentation
   Forum for Investors
   Company updates on key activities and investment potential.
- Letter Writer Presentations for Investors
   Learn how to select profitable investments from key industry

newsletter writers.

# Visit 1,100+ EXHIBITORS

PROMOTING LEADING PRODUCTS, SERVICES, MINING JURISDICTIONS, INVESTMENT AND DEVELOPMENT OPPORTUNITIES

- · Core Shack
- Investors Exchange
- Prospectors Tent
- Trade Show & Trade Show North

# **PDAC 2020**

## Message from the President



There are countless reasons for attending the PDAC Convention in Toronto each year. While the weather is most likely not one of them given the time of year, you can bet that everyone is there in some way, shape or form for the unbeatable networking opportunities the event offers.

Whether it's making new business contacts, reconnecting with former colleagues, finding the next job, or browsing the latest

investment prospects, people are at the centre of it all. And why wouldn't they be? Mineral exploration and mining is a vast, international industry with a plethora of personalities— and the annual PDAC Convention is the perfect setting to see it unfold before your very eyes.

PDAC 2020 marks the 88th year for the event. While I'm no stranger to it, this will be my first year attending as President of the association—a role I'm honoured to have, especially during a time of transition and excitement for the sector.

Minerals and metals have always had the great potential to support the development of communities and nations looking to capitalize on their natural resources. Today, they are a key ingredient in the global movement towards a low carbon economy.

Setting the bar high in 2019 we welcomed 25,843 attendees from 132 countries. This included more than 500 self-identified Indigenous Peoples and Canada's Prime Minister, Justin Trudeau. It was also our first year expanding Trade Show North to meet the growing exhibitor demand.

In addition to an exceptional lineup of programs, Short Courses, events, speakers and exhibitors, Catherine Raw, Chief Operating Officer, North America at Barrick Gold Corporation will present at the Mineral Outlook Luncheon to discuss merger and acquisitions in the mining sector and the return of the mega deal. The International Mines Ministers' Summit, a special platform for ministers who are responsible for mining around the world to come together, will return for its fifth year.

To stay informed of the latest news and information about PDAC 2020: The World's Premier Mineral Exploration and Mining Convention, visit www.pdac.ca/convention.

I look forward to welcoming you to the event!



Felix Lee
Prospectors & Developers Association of Canada

# 2020 CONVENTION PLANNING COMMITTEE

Aleksandr Mitrofanov SRK Consulting (Canada) Inc.

Antoine Caté SRK Consulting (Canada) Inc.

Antoine Schwartzmann Newmont Mining Corporation

Bill Mercer Avalon Advanced Materials Inc.

Bob Valliant Tri Origin Exploration Ltd.

Charles Beaudry Orefinders Resources Inc.

David Christie Orford Mining Corp.

David Davidson Paradigm Capital Inc.

Donald Bubar Avalon Advanced Materials Inc.

Eric Owens Consultant

James Lusby PwC LLP

James Siddorn SRK Consulting (Canada) Inc.

Jean des Rivières BHP

Jim Chan Environmental Resources Management (ERM)

Joe Hinzer Watts, Griffis and McOuat Limited

John Morganti Lucca Advisors Inc.

John Sullivan Mineral Exploration Consultant

Katarina Bjorkman Bjorkman Prospecting

Keith Spence Global Mining Capital Corp.

Mark Fellows Skarn Associates Limited

Mark Ferguson S&P Global Market Intelligence

Neil Gow Independent Consultant

Patricia Sheahan Consultant

Patricia Stirbys Consultant

Patrick Chance (Co-Chair) Patrick Chance & Associates

Peter Bojtos Independent Company Director

Peter Legein Legein Consulting Inc.

Raymond Goldie Independent Analyst and Director

Reno Pressacco RPA

Resa Furey Stantec

Robert Boyd (Co-Chair) Endurance Gold Corporation

Robert Hearst Southern Geoscience Consultants

Shuda Zhou Orix Geoscience Inc.

Spencer Ramshaw RSR Freelance

Stephen Wallace Searchlight Resources Inc.

Susan Muir Mkango Resources Ltd.

Ted Reeve Haliburton Mineral Services Inc.

Terence Ortslan TSO & Associates

Valerie Wilson RPA

Volker Moeller Avalon Advanced Materials Inc.

# **TABLE OF CONTENTS**

Attendee and Registration into
Convention Planning Committee4
Exhibits
Core Shack10
Exhibit Hours10
Investors Exchange10
Prospectors Tent10
Trade Show & Trade Show North11
Media Partners12
Message from the President4
Networking Events
Mining Matters Hockey Tournament14
Opening Ceremonies14
Luncheons
Mineral Outlook Luncheon15
Student-Industry Networking Luncheon17
Receptions
Mining for Diversity Reception17
Opening Day Reception15
PDAC New Members Networking Reception14
The Network — NEW RECEPTION16
Trade Show Reception15
Evening Events
Awards Gala & After Party16
Grand Finale17
North Meeting Space11

PDAC Membership23
Programming
Building an investor toolkit: Practical tips seminar22
Capital Markets Program18
Corporate Presentation Forum for Investors20
Cutting Edge20
Exploration Insights20
Indigenous Program21
Keynote Program22
Letter Writer Presentations for Investors22
PDAC One on One Meeting Program26
Presentation Rooms26
Reception Rooms27
Short Courses28
Student & Early Career Program37
Sustainability Program39
Technical Program41
Services Onsite46
<b>Sponsors</b> 24

# ATTENDEE AND REGISTRATION INFO

**SAVE 40%** — **REGISTER** by February 7 on an All Access Pass and individual membership!

# pdac.ca/convention

# **STEP 1** > **Select your pass type**

(Fees include tax)

## **ALL ACCESS PASS**

Pass Types	Early Rate (Paid by Feb 7)	<b>Regular Rate</b> (Paid after Feb 7)
Member	\$299.99	\$489.99
Non-Member	\$599.99	\$829.99

ı	<b>SENIOR</b> (Must be 65 years of age or older)		
	Member & Non-Member	\$79.99	\$139.99

<b>STUDENT</b> (Must be enrolled full-ting	me in a recognized a	cademic program)
Member	\$49.99	\$79.99
Non-Member	\$109.99	\$139.99

ı	ONE DAY (Can be purchased for single or multiple days)		
	Member	\$199.99/day	\$199.99/day
	Non-Member	\$449.99/day	\$449.99/day

# UPGRADE TO A **VIP ALL ACCESS PASS**

Pass Types	Early Rate (Paid by Feb 7)	<b>Regular Rate</b> (Paid after Feb 7)
Member	\$699.99	\$879.99
Non-Member	\$1,099.99	\$1,309.99

Upgrading to a VIP All Access Pass gives you All Access Pass inclusions, plus:

- Exclusive access to the VIP Lounge (restricted to pass holders only) which includes daily continental breakfast and light refreshments throughout the day
- · A dedicated registration desk with attendants providing scanning and photocopying services
- · Complimentary, private meeting rooms for up to 10 people (non-VIP attendees are permitted access to the meeting rooms)

Space is limited. Register Now!

# **YOUR ALL ACCESS PASS INCLUDES:**

#### **PROGRAMMING**

- · Building an investor toolkit: Practical tips seminar - NEW
- Capital Markets Program
- Corporate Presentation Forum for Investors
- Cutting edge NEW
- Exploration Insights
- Indigenous Program
- Letter Writer Presentations for Investors
- Sustainability Program
- Student & Early Career Program
- Technical Program

#### **EXHIBITS**

- · Core Shack
- Investors Exchange
- Prospectors Tent
- Trade Show
- · Trade Show North

#### **NETWORKING EVENTS**

- Opening Day Reception (includes one drink ticket)
- The Network NEW RECEPTION (includes one drink ticket at the door)
- Trade Show Reception (includes one drink ticket)
- · Mining for Diversity Reception
- Student-Industry Networking Luncheon (RSVP when you register for convention)
- Grand Finale (includes two drink tickets at the door)

#### **TICKETS**

- Headshot
- · Shoe Shine
- Drink Tickets

#### **PLUS A CONVENTION BAG**

#### Inside you'll find a:

- · Convention Program
- Notebook
- Pen



Sponsored by





# STEP 1 > Select your pass type continued

#### **EXHIBITS DAY PASS**

Pass Types	Early Rate (Paid by Feb 7)	Regular Rate (Paid after Feb 7)
Member & Non-Member	\$24.99/day	\$24.99/day

Can be purchased for single or multiple days. Admission is valid only for the date(s) purchased. To attend networking events, attendees must have a pass valid for the event date.

#### This pass includes:

#### **EXHIBITS**

- Core Shack

- Investors Exchange
- Trade Show
- Trade Show North
- Prospectors Tent

#### **PROGRAMMING**

- Building an investor toolkit • Exploration Insights NEW
- Corporate Presentation Forum for Investors
- Cutting Edge NEW
- Letter Writer

Presentations for Investors

#### **NETWORKING EVENTS**

- one drink ticket at the door)
- Trade Show Reception (includes one drink ticket)
- The Network NEW (includes Mining for Diversity Reception
  - Grand Finale (includes two drink tickets at the door)

#### **TICKETS**

 Headshot Shoe Shine Drink Tickets

# **BASIC PRESENTATIONS PASS FREE**

Does not provide exhibit access, please see All Access or Exhibits Day Pass descriptions.

#### This pass includes:

#### **PROGRAMMING**

- · Corporate Presentation Forum for Investors
- Exploration Insights
- · Letter Writer Presentations for Investors

#### NETWORKING EVENTS

 Grand Finale (includes two.) drink tickets at the door)

· Mining for Diversity Reception

The Exhibits Day Pass and the Basic Presentations Pass also include an event tote bag and a Convention Program.

## STEP 2 > Purchase Tickets

Purchase tickets at www.pdac.ca/convention. HURRY! Tickets sell out quickly.

DON'T MISS OUT on Networking Events and Short Courses!

Networking Events	Prices start at	Page
Mineral Outlook Luncheon	\$89.99	15
Awards Gala & After Party	\$174.99	16
Student-Industry Networking Luncheon   RSVP when you register for convention	_	17
Short Courses (details and pricing vary)	Prices start at	Page
An in-depth overview of US mining law	\$449.99	29
Concepts and application of machine learning to mining geoscience	\$699.99	30
Environmental intelligence	\$449.99	32
Fundamentos de estimación de recursos minerales	\$699.99	34
Geological interpretation of aeromagnetic data	\$449.99	30
Gold: Geology, geochemistry, genesis and exploration	\$899.99	31
Greenstone belt architecture and metal endowment within the Abitibi Terrane	\$499.99	33
Health & safety for mineral exploration	\$74.99	32
Minimizing environmental impact	\$74.99	28
Mining financial modeling	\$499.99	29
Public reporting, professional practice, and industry guidance: Meeting expectations of securities regulators	\$199.99	35
Qualitative and quantitative prospectivity mapping and assessment of undiscovered mineral resources	\$499.99	35
The value proposition for geophysics: It's not just discovery	\$199.99	36
Will this exploration project become a mine?	\$699.99	31

# ATTENDEE AND REGISTRATION INFO

# STEP 3 > Register

## PDAC REGISTRATION DEPARTMENT



www.pdac.ca/convention/registration



(L +1 866 939 6468 or +1 647 362 8442



+1 647 362 8442

PDAC Registration Department 800-170 University Ave Toronto, ON M5H 3B3 Canada

# **Important Dates FEBRUARY 7, 2020**

## **Deadline for early registration rate**

Register and pay online, by mail or fax to receive early rates. Cheque payments will not be accepted after this date.

# **FEBRUARY 21. 2020**

# Deadline to register and pay by fax or mail

After this date, only online registration will be accepted and payment must be made online or onsite.

# **FEBRUARY 28, 2020**

Onsite registration opens and available tickets (if any) may be purchased at the Ticket Sales Counter, Metro Toronto Convention Centre (MTCC), South Building, Level 600.

#### **REGISTRATION DESK HOURS**

Friday, February 28	7 am — 6 pm
Saturday, February 29	7 am — 6 pm
Sunday, March 1	7 am — 5 pm
Monday, March 2	7 am — 5 pm
Tuesday, March 3	7 am — 5 pm
Wednesday, March 4	$7\mathrm{am}-12\mathrm{pm}$

# **Payment Options**

Wire transfers are not accepted. Acceptable methods of payment are VISA, MasterCard or AMEX and cheque (until February 7, 2020 only). All cheques must be drawn from a CDN or US bank. All fees are quoted in CDN dollars. Payment may be made in US dollars using an exchange rate of CDN \$1.15 per US dollar. Registration and ticketed event purchases will not be processed until full payment is received. After February 21, 2020 only online payments and payments at the Onsite Cashier counter, MTCC, South Building, Level 600, will be accepted.

# **Cancellation Policy**

Cancellations must be submitted in writing (email or fax) and received by February 21, 2020 to receive a full refund less a 25% administration fee. There is no refund for cancellations received after February 21, 2020 membership fees are non-refundable.

#### Hotels



Wisit www.pdac.ca/hotels for participating hotels. Please book directly with the hotel and indicate you will be attending PDAC 2020.

#### **International Attendees**

For information on international invitation letters and to submit an online request form, visit www.pdac.ca/ convention/internationalattendees. PDAC does not accept any responsibility for visa applications. If an attendee is unable to attend because of failure to obtain a visa, the normal cancellation policy for registration fees will apply.

#### **Mobile Planner**

Sponsored by





Wisit our mobile friendly website at www.pdac.ca/convention

Works like an app. Planning your customized schedule for PDAC 2020 is just a click away.

- · Add events and presentations to your calendar
- Locate and save exhibitors
- View floorplans



# **PDAC Membership**

Join our Community—become a member of the world's leading mineral industry association and help strengthen our collective voice! Your membership contributes to the PDAC's efforts to support a competitive exploration and development industry that operates responsibly in Canada and around the world. With a membership of over 6,500 individual and 1,000 corporate members, PDAC undertakes advocacy, develops programs, and organizes the world's largest annual mineral convention. Sign up today at events.pdac.ca or contact info@pdac.ca for more information.

# **Presentation & Reception Rooms**



Entrance requirements to individual Presentation & Reception rooms vary. For room descriptions and registration requirements, visit www.pdac.ca/convention/programming/presentationreception-rooms

# **Volunteer Opportunities** for Students

Save money and network with industry professionals while at the convention! Volunteer your time in exchange for a complimentary Student All Access Pass, a ticket to the Student-Industry Networking Luncheon, a gift card, food vouchers and more. Sign up today at www.pdac.ca/convention/volunteers



# **EXHIBITS**

**SHOW HOURS:** 

Sunday, March 1 – Tuesday, March 3 Wednesday, March 4

10:00 am - 5:00 pm 9:00 am - 12:00 pm

#### **INVESTORS EXCHANGE**

All Access Pass, Exhibits Day Pass required

Sponsored by



## **♀** South Building, Level 800

Interested in investing in the exploration industry? Discuss investment potential with 500 junior mining companies, mid-sized producers, major mining companies, financial institutions and prospectors.

#### **Exhibitors include:**

- · Aethon Minerals Corp.
- · Agnico Eagle Mines Limited
- Anglo American
- · Centerra Gold Inc.
- EMX Royalty Corporation
- IAMGOLD Corporation
- · Japan Gold Corp.
- · Kinross Gold Corp.
- · Laurion Mineral Exploration Inc.
- · Manex Resource Group Inc.
- · New Gold Inc.
- Newmont Goldcorp Corporation
- · Panoro Minerals Ltd.
- Red Pine Exploration Inc.
- · Sokoman Minerals Corp.
- · Wesdome Gold Mines
- Wheaton Precious Metals
- · Yamana Gold Inc.

#### PROSPECTORS TENT

All Access Pass, Exhibits Day Pass required

South Building, Level 800, Investors Exchange

Get back to the heart of the industry with a visit to the Prospectors Tent. Self-employed and independent prospectors will be there to discuss their maps, samples and claim results.

#### **CORE SHACK**

All Access Pass, Exhibits Day Pass required

Sponsored by



**♀** South Building, Level 800, Investors Exchange

Core Shack offers a venue for companies to display their core samples. Attendees are welcome to get up close and personal with projects that are generating exciting new drilling results. In addition to core samples, exhibitors will be displaying maps, charts and technical information on their drilling projects.

#### Core Shack is comprised of two sessions:

Session A	
Sunday, March 1	10:00 am – 5:00 pm
Monday, March 2	10:00 am – 5:00 pm
Session B	
Session B Tuesday, March 3	10:00 am – 5:00 pm

For a full list of exhibitors, visit www.pdac.ca/convention/exhibits

#### TRADE SHOW & TRADE SHOW NORTH

All Access Pass, Exhibits Day Pass required

Sponsored by



South Building, Level 800 and North Building, Level 300

Visit the Trade Show & Trade Show North to come faceto-face with over 600 exhibitors showcasing the best products, services and technologies and meet government representatives from around the world all in one place.

#### **Exhibitors include:**

- Argentine Mining Industry Pavilion
- · Dias Geophysical Limited
- Epiroc
- GF Instruments
- · ITC Global
- Major Drilling
- Matawa First Nations
- Mining Finland
- · Natural Resources Canada
- · Northern Ontario Mining Showcase
- Peru
- · Québec, Gouvernment du
- Queen's University, Department of Geology
- Seeguent
- US Geological Survey
- · Yukon, Government of
- For a full list of Exhibitors, visit www.pdac.ca/convention/exhibits

#### **EXHIBIT FLOOR ATTRACTIONS**

#### **Social Scene**

♦ North Building, Level 300, Trade Show North

Share your PDAC experience online with your friends and colleagues. Enjoy the Social Scene where you can take team pictures and selfies with a variety of fun props in front of the PDAC backdrop. Post your pictures on social media with the hashtag #PDAC2020.

#### **Kirwin Collection**

North Building, Level 300, Trade Show North

The Royal Ontario Museum's Kirwin Collection is a can't miss attraction on the Trade Show North show floor.

The Kirwin Collection was built from hundreds of deposits and localities from around the world. Select samples from the collection will be featured in this booth. It is truly a geological library!



### **NORTH MEETING SPACE**

♦ North Building, Level 300, Trade Show North

Rent a private meeting room at PDAC for any duration during show hours. Located conveniently onsite so you and your team don't have to brave the cold air! Discounted price for full-day bookings.

#### **Pricing:**

\$125.00 + \$16.25 (HST) = \$141.25/Hour

\$775.00 + \$100.75 (HST) = \$875.75/Day

Prices are per 10'x10' room. Fits 4-6 people. If you need a larger custom room please contact: Kimberly Charters at kcharters@pdac.ca.

To book your meeting space, visit: www.pdac.ca/convention/attendee-info/north-meeting-space

# **MEDIA PARTNERS**



#### South Building, Level 800

Free exploration and development-related publications are available to all attendees from literature bins and tabletop displays.

#### **2020 MEDIA PARTNERS**

- · Assay, The
- · BNN Bloomberg
- · Brasil Mineral
- BTV-Business Television
- Bull & Bear Financial Report, The
- · Canadian Mining Magazine
- · Chile Explore Report
- CIM Magazine
- · Commodity-TV
- Coring Magazine
- CPOstrategy
- DEL Communications
- · El inversor Energtico & Minero
- · Engineering & Mining Journal
- · Enlace Minero Magazine
- Euro Canada News, The Canadian National News, The European Club of Canada
- Fast Markets
- Gest Media
- Global Business Reports
- · Global Mining Review
- · Globe and Mail, The
- Goldletter International

- · Hill Times, The
- In The Mine
- International Mining
- Investing News Network
- InvestorIntel
- · Lexpert Magazine
- Kitco News
- Metals News
- Mexico Mining Review
- Mineral Exploration
- MinerAndina
- · Minergia Colombia
- Minergia Ecuador
- · Mineria Chilena Magazine
- · Miners News
- MINEX Forum
- · Mining & Quarry World
- · Mining Equipment Prospector, The
- · Mining Frontier
- Mining Global
- · Mining Record, The
- Mining Review Africa
- · Mining Stock Education
- · Mining Weekly

- MundoMinero
- · nafinance.com
- nai500.com
- · Natural Resources Magazine
- · North of 60 Mining News
- · Northern Miner, The
- · Oil and Gas Republic
- · Peru, The Report
- Private Investor Magazine, The
- · ProActivo Magazine
- Prospector Resource Investment News, The
- Resource World Magazine
- · Ressources Mines et Industrie
- · Revista Minería
- Revista Minería Sustentable
- · Revista Rumbo Minero
- · Rumbo Minero TV
- SmallCapPower
- Society of Economic Geologists, Inc.
- Stockhouse
- StockPulse
- Up Here Magazine





# NETWORKING EVENTS Pass or ticket required

# Don't miss out on these valuable networking opportunities!

- Tickets sell out quickly so buy your tickets in advance with your convention registration
- Corporate tables, identified with company name, are available when you purchase a table of 10 for the Mineral Outlook Luncheon or the Awards Gala & After Party

# MINING MATTERS **HOCKEY TOURNAMENT**

# **SATURDAY, FEBRUARY 29**

8:00 am - 5:00 pm

Scotiabank Pond, Downsview Park, Toronto



Presented by



Mining Matters invites members of the minerals, government, finance and academic sectors to join us for the 13th annual Mining Matters Hockey Tournament. Be a sponsor or enter a team that will hit the ice on February 29. Teams will compete to see their name engraved on the coveted Caracle Cup! The day also features a \$10,000 Shoot for Loot challenge and fabulous raffle prizes. A Fossils Division is available for players over 40 years of age. Spaces are limited.

Don't have a team? No problem. Individuals without a team wanting to play can be placed subject to space.

#### **About Mining Matters**

The Mining Matters Hockey Tournament is an important annual fundraising event. It combines intensity and fun, and brings members of the minerals industry together in support of our goal to educate students, teachers and the public about Earth science and the importance of mineral resources.

For further information, please contact Sarah Hahn, Tournament Coordinator, at 416 863 6463 ext. 321 or tournaments@mininamatters.ca

# **OPENING CEREMONIES**

Open to all pass types

# **SUNDAY, MARCH 1**

10:30 am - 11:30 am

South Building, Level 700

Join Felix Lee, PDAC President, and other special guests as we mark the official opening of the 2020 Convention.

# **PDAC NEW MEMBERS NETWORKING** RECEPTION By invitation only

# **SUNDAY, MARCH 1**

3:00 pm - 5:00 pm

South Building, Level 700

Presented by



PDAC is delighted to host an event exclusively for new members! Over 1,500 industry professionals are invited to network with PDAC Directors and fellow members from around the world. This is an opportunity to meet with your peers, make valuable connections and discuss key issues central to the mineral industry.

New members who RSVP will receive a complimentary drink ticket with their pass. Cash bar available.

Not a PDAC member? Join now at www.pdac.ca/members/membership

# **OPENING DAY** RECEPTION

All Access Pass, Exhibits Day Pass, **Exhibitor Staff Pass required** 

## **SUNDAY, MARCH 1**

4:00 pm - 6:00 pm

**♥** North Building, Level 300, Trade Show North

Sponsored by

# **RBC CAPITAL MARKETS SCOTIABANK**

Come to the largest networking event at the convention! Connect with attendees, peers and exhibitors while you enjoy a free drink and appetizers.

All Access Pass holders get a drink ticket with their pass. Cash bars available.

# TRADE SHOW RECEPTION

All Access Pass, Exhibits Day Pass, **Exhibitor Staff Pass required** 

# **MONDAY, MARCH 2**

3:00 pm - 5:00 pm

**♥** North Building, Level 300, Trade Show North

Sponsored by



Enjoy a free glass of wine or beer as you network with Trade Show North exhibitors and attendees from around the world, including organizations promoting technology, products, services and mining jurisdictions.

All Access Pass and Exhibits Day Pass holders get a drink ticket with their pass. Cash bars available.

# **MINERAL OUTLOOK LUNCHEON**

Admission ONLY with ticket

## **MONDAY, MARCH 2**

12:00 pm - 2:00 pm

**♀** South Building, Level 700

Sponsored by





## **M&A** in the mining sector: The return of the mega deal, the reasons why and implications for the future



**Catherine Raw** Chief Operating Officer, North America Barrick Gold Corporation Toronto, Canada

2019 saw the return of major M&A activity in the mining industry. Join us as Catherine Raw discusses the recent spate of M&A in the gold mining sector, how it differs from that of the past, what it means for the mining industry as a whole, and the potential implications this has on investment and growth in the future.

Catherine is the executive

responsible for the North America region at Barrick Gold Corporation. She was formerly Chief Financial Officer. Catherine joined the company in May 2015 as Executive Vice-President, Business Performance, and was previously co-manager of BlackRock's flagship mining funds. She holds the chartered financial analyst designation, a Master's degree in Natural Sciences from the University of Cambridge and an MSc in Mineral Project Appraisal from Imperial College, London.

Ticket: \$89.99 (includes a three-course meal, tax & aratuity)

# NETWORKING EVENTS

Pass or ticket required

# THE NETWORK

All Access Pass, Exhibits Day Pass, **Exhibitor Staff Pass required** 



## **MONDAY, MARCH 2**

6:00 pm - 8:00 pm

♥ Fairmont Royal York, Canadian Room

#### NETWORKING! NETWORKING! NETWORKING!

Looking for valuable networking opportunities at PDAC 2020?

THE NETWORK - PDAC's new reception is the must attend event to connect with domestic and international professionals, and discuss matters shaping the industry.

Join us for a FREE drink and appetizers while you mix and mingle with potential business contacts.

Attendees receive a drink ticket at the door. Cash bars available.

**IMPORTANT: Convention Pass required for entry** 



# **AWARDS GALA** & AFTER PARTY

**Admission ONLY with ticket** 

## **TUESDAY, MARCH 3**

5:30 pm - 11:00 pm

₱ Fairmont Royal York, Canadian Room.

**Proud Sponsors** 

Awards Gala



**Dinner Wine** 

Reception & After Party





The PDAC Awards Gala celebrates excellence in the global mineral exploration and mining industry, and is the ideal place to host your clients and network with key players. Enjoy drinks on arrival, followed by a sumptuous three-course gourmet dinner and fine wines.

Then... it's on to the AFTER PARTY!

Your opportunity to rub shoulders with Award recipients, C-level executives, financiers, brokers and mining developers. Enjoy two complimentary drink tickets and a great party atmosphere—the perfect backdrop for unlimited networking!

ALWAYS A SOLD OUT EVENT, seats at the PDAC Awards Gala are strictly limited and won't last long. Reserve an individual seat or book a table for 10!

5:30 - 7:00 pmReception 6:15 pm Doors Open Bars Close 6:30 pm Dinner 7:00 - 8:00 pm

8:00 - 9:00 pm **Awards Presentations** 

9:00 - 11:00 pm After Party

Dress: Business Attire, Black Tie Optional

Ticket: \$174.99 Table of 10: \$1,749.90

(includes tax & gratuity)

# STUDENT-INDUSTRY **NETWORKING LUNCHEON**

RSVP when you register for the convention

# **TUESDAY, MARCH 3**

11:30 am - 1:30 pm

North Building, Level 100

Sponsored by

# **LUNDIN**GROUP

This reception-style buffet luncheon provides an opportunity for students, early career and industry professionals to network in a relaxed environment. The winner of the Mary-Claire Ward Geoscience Award and the Joan Bath and Peter Howe Bursarv for Advancement in the Mineral Industry will be announced, as well as the selected 2020 Student-Industry Mineral Exploration Workshop (S-IMEW) students.

# MINING FOR DIVERSITY RECEPTION Open to all pass types

# **TUESDAY, MARCH 3**

4:00 pm - 6:00 pm

**♥** North Building, Level 100

This event celebrates diversity and inclusion. The theme for this year — STRONGER TOGETHER — invites everyone to celebrate mineral and mining professionals and students who open doors and work hard to build a more inclusive industry.

Join us for the opportunity to network and honour this year's Awards recipients. The WIMC Awards are presented annually to individuals who have been instrumental in enabling the increase of a diverse workforce and an inclusive workplace within the mining industry. These include the Trailblazer Awards, Trailblazer Indigenous Awards, and the Rick Hutson Mentorship Award.

This event is coordinated by Women in Mining Canada in partnership with PDAC, with generous support from various organizations.

For more information, visit www.wimcanada.org

# **GRAND FINALE**

Open to all pass types Must provide photo identification 19+ event

# **WEDNESDAY, MARCH 4**

8:00 pm - 12:00 am

♥ Fairmont Royal York, Canadian Room

Sponsored by



After four exhilarating days at the world's premier mineral exploration and mining convention, it's time to PARTY!

Come and enjoy this FREE must-attend event! Dress casual and get your two FREE drink tickets at the door. Grab a bite to eat and dance, dance, dance!

#### **IMPORTANT:**

Keep your convention pass when leaving the **Metro Toronto Convention Centre.** Admission ONLY with your convention pass.



# Capital Markets Program All Access Pass required

Sponsored by



South Building, Level 700

# **MONDAY, MARCH 2**

9:15 am - 9:25 am

## Opening remarks

Delivered by Maureen Jensen, Chair & CEO, Ontario Securities Commission (OSC)

#### 9:30 am - 10:45 am

## Securities regulation update: Regulatory burden reduction and recent trends and issues affecting mineral issuers

In an interactive discussion focused on mineral issuers, senior staff from various departments across the Ontario Securities Commission (OSC) will discuss the recently released Burden Reduction Task Force Report, the Annual Summary Report for Dealers, Advisers and Investment Fund Managers and the Whistleblower Program. Attendees will hear how the OSC's commitment to reduce regulatory burden on capital markets participants has directly impacted mineral issuers. In addition, there will be a discussion around the challenging and complex cases identified by the OSC through its whistleblower program, the importance of implementing a strong internal compliance program and potential benefits for companies from the mineral sector.

#### 11:00 am - 12:15 pm

# Financing the mineral industry: **Investment banker perspectives**

The ever-popular discussion with Canada's leading mineral industry investment bankers is back! This cornerstone session will provide bankers' perspectives on mineral industry financing. Central topics will include the impact of changes in key metal prices on financing trends, industry M&A activity and potential implications for the future, along with the relationship between structural changes in capital markets and the ability of the mineral industry to attract investment.

#### 2:00 pm - 3:00 pm

## **Capital Markets Regulatory Authority:** Mineral industry benefits from harmonized regulation

Canada is closer than ever to establishing a pan-Canadian securities regulator. The Capital Markets Regulatory Authority (CMRA) is a joint effort by the governments of British Columbia, New Brunswick, Nova Scotia, Ontario, Prince Edward Island, Saskatchewan and Yukon to merge their securities regulators into a single organization that would administer harmonized legislation and rules. The head of the agency leading the integration of the participating regulators will be joined by a number of experienced market participants to discuss the benefits of the new system and issues associated with the transition, as they relate to SMEs and the mineral industry.

#### 3:30 pm - 4:30 pm

# **Creeping expropriation: How government** policy risk overseas impacts access to capital

Increasingly, a mining company's ability to access capital is affected by the perceived impact of the host government's policy decisions on the potential future operations of the company. Whether it's legislative or regulatory change, or new forms of taxation that did not exist at the time of the investment, "creeping expropriation" is one of the most significant political risks that investors and operators now encounter, especially in developing countries. This panel, composed of investors and operators, will explore how government policy risk is impacting mining companies, and how they can manage this risk.

#### South Building, Room 700

## **TUESDAY, MARCH 3**

#### 9:15 am - 10:15 am

## **Financing trends and investment** dynamics in mineral exploration

This session will outline the current investment environment for the mineral exploration sector from several perspectives. Recent financing activity and capital market trends will be presented and contextualized based on PDAC analysis of various sector-focused data points. In addition, dynamic shifts in the mineral exploration investment landscape over the last decade will be reviewed and material factors influencing these shifts will be discussed by panel of experts.

#### 10:45 am - 11:45 am

# **Bringing generalists back to gold**

For years, generalist investors have avoided the gold sector, citing poor capital allocation and subpar returns, even as gold prices remained relatively flat. With gold prices rallying and retracing highs not seen in six years, what will it take for generalist capital to flow back into the sector? This session will explore the factors and metrics generalists consider when evaluating gold equities, as well as a discussion of the role of gold in portfolio diversification. There will also be a discussion on liquidity and generalist interest in intermediate and junior gold companies — that is, looking beyond the big players.

#### 2:00 pm - 3:00 pm

# Digging deeper into responsible investment: How are investors integrating environmental, social and governance factors and what does it mean for the global mineral sector?

In a recent global survey, 97% of institutional investors said they evaluated companies' environmental, social and governance (ESG) disclosures. What does this mean for small producers and mineral exploration companies seeking institutional investment?

The session will provide a brief introduction to responsible investing in mineral exploration and extraction context, exploring its importance to institutional investors and implications for access to capital. Attendees will hear about how small mineral explorers and producers are managing and disclosing on ESG performance — in Canada and globally. A moderated panel of investors will share practical insights about how ESG impacts investment decision-making in the global mineral sector.

## 3:30 pm - 4:30 pm

## **Expanding your horizons internationally:** Targeting a worldwide investor base

The single most important driver in the mineral sector is the inflow of investor capital. In a constantly evolving market, the one thing that makes most of us lose sleep, is wondering where the next investor dollar is going to come from. Usual capital providers have been tapped and the conventional investment hubs (Toronto, New York, Boston, Montreal and Vancouver) are not what they used to be.

This panel includes individuals who focus on uncovering investors in non-traditional geographic locations, and who will discuss ways to bridge the gap in order to attract and sustain investors on a global scale.



# **Corporate** Presentation **Forum for Investors**

Open to all pass types

# **MONDAY, MARCH 2** & TUESDAY, MARCH 3

10:00 am - 5:00 pm

South Building, Level 800

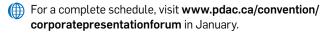
Sponsored by



Hear exploration and development companies present up-to-the-minute information on their current activities and investment potential.

#### Themed sessions include:

- Copper
- Diamonds
- Energy materials and specialty products
- · Gold: Americas
- · Gold: Africa. Eurasia and Pacific
- · Gold: Development
- · Gold: Exploration
- Nickel and PGM
- · Royalty companies, prospect generators and global financing
- Silver
- Uranium
- Zinc



# **Cutting Edge**



All Access Pass, Exhibits Day Pass or Exhibitor Staff **Pass required** 

## **SUNDAY, MARCH 1**

1:00 pm - 5:00 pm

South Building, Level 800

This stage will be located in the Investors Exchange, where unique and innovative ideas will be presented. This is a great opportunity to be exposed to some forward-thinking ideas you may not have considered.



Visit www.pdac.ca/convention/programming/cutting-edge for more details and to apply.

# **Exploration Insights**

Open to all pass types

## **TUESDAY, MARCH 3**

9:00 am - 12:00 pm

South Building, Level 700

Sponsored by

IBK CAPITAL CORP.

Selected from a call for abstracts, these technical, policy and academic presentations offer insights into current and topical subjects.



For a complete schedule, visit www.pdac.ca/convention/ explorationinsights in January.



# Indigenous Program All Access Pass required

South Building, Level 700

# **MONDAY, MARCH 2**

9:00 am - 11:30 am

## The mineral industry and Indigenous communities: Lessons from Canada and abroad

This session will seek to identify key issues between exploration and mining companies and Indigenous communities, both in Canada and abroad. Presentations will explore how companies and communities work together using innovative solutions to address a variety of issues.

Specifically, panelists will share insights and experiences about operating in different political, social and cultural contexts. By examining these relationships between Indigenous communities in Canada and internationally, this session will highlight some of the unique and common challenges, as well as the opportunities when building relationships and developing partnerships.

#### 2:00 pm - 4:30 pm

## The Indigenous Forum: Planning for the future

The Indigenous Forum brings together mineral industry practitioners, Indigenous communities and companies, and governments to share experiences and highlight the outcomes when working constructively together. The event is a venue for discussion on how mutually-beneficial relationships are created and sustained in order to foster a successful mineral industry in Canada, and generate a wide range of opportunities for Indigenous Peoples.

Showcasing a case study from British Columbia, this session will provide an in-depth look at how Indigenous communities can maximize opportunities from participating in mineral exploration and mining projects, and how this can support future generations.

The session will also include discussion on leading practices in community engagement and Indigenous participation in the mineral industry.

The session will be followed by a networking reception from 4:30-5:30 pm sponsored by Fasken.

## **TUESDAY, MARCH 3**

#### 9:00 am - 12:00 pm

## Indigenous law and regulatory frameworks: **Navigating a dynamic landscape**

Jurisprudence related to Aboriginal rights in Canada and regulatory initiatives are constantly evolving. This in turn contributes to the shaping and reshaping of the legal landscape surrounding the mineral sector. While there is clarity in some areas, new questions and complexities are also raised. Increasing dialogue related to various frameworks and court decisions also contributes to the way in which companies and communities perceive and understand their roles in the sector.

This session will seek to examine some of the recent legal decisions, frameworks and regulatory initiatives, as well as key challenges and opportunities that arise for mineral companies and Indigenous communities in relation to the mineral exploration and mining landscape.

## 2:00 pm - 4:30 pm

# **Indigenous businesses & the mineral** industry: Prosperity through partnerships

The mineral exploration and mining industry and Indigenous communities continue to explore ways to develop positive relationships that translate into mutually-beneficial outcomes both successful mineral projects and long-term economic development opportunities for communities. From mineral exploration to mine development and operations, there are many ways in which businesses in communities can develop and grow alongside mineral projects. This session will feature presentations from Indigenous-owned and/or operated businesses sharing their experiences interacting with the mineral sector, highlighting challenges and opportunities.

#### 6:00 pm - 10:00 pm

Fairmont Royal York, Canadian Room

## **Skookum Jim Award Presentation: Awards Gala & After Party**

Admission with ticket

The Skookum Jim Award recognizes and honours Indigenous individuals and businesses demonstrating exceptional achievement and/or service in an Indigenous-run service business for the Canadian minerals industry or a Canadian Indigenous exploration or mining company, or have made a significant individual contribution to the industry.

# **KEYNOTE PROGRAM: Discoveries of** the 21st century

**All Access Pass required** 

## **MONDAY, MARCH 2**

South Building, Level 700

9:35 am - 11:35 am

CHAIRS: James Siddorn, SRK Consulting (Canada) Inc. & James Lusby, PricewaterhouseCoopers LLP, Toronto, Canada



Finding and building world-class in different continents. Mark Bristow, **Barrick Gold Corporation** 



**Brucejack Mine:** From discovery to production, Joe Ovsenek, Pretium Resources Inc.



Ivanhoe Mines is delivering the triple crown of Southern Africa's mining future: Kamoa-Kakula, Kipushi and Platreef, Robert Friedland. Ivanhoe Mines Ltd.

# **Investor Toolkit Series**

**SUNDAY. MARCH 1** 

South Building, Level 800

Sponsored by

SPROTT INC. PETER BOJTOS

10:00 am - 12:00 pm

# **Building an investor toolkit: Practical tips seminar**



All Access Pass, Exhibits Day Pass or **Exhibitor Staff Pass required** 

This seminar will feature a series of professionals who will offer practical tips on how to start investing in the mineral industry to increase the odds of making money on investments. How to put the first dollar to work, types of investment platforms, relevant terminology, and impactful news flow will be put into context to help build out the investor toolkit. The seminar will provide attendees with greater confidence in engaging mineral exploration and mining companies, and identifying investment opportunities at the convention.

## 12:00 pm - 5:00 pm

# **Letter Writer Presentations for Investors**

Open to all pass types

Listen to industry commentators present their market research and ideas on how to select good investments in the resource sector.

#### Speakers include:

- · Jayant Bhandari, Anarcho Capital
- Adrian Day, Global Analyst
- · Trevor Hall, Clear Creek Digital
- Louis James. The International Speculator
- Chantelle Schieven, Murenbeeld & Co.
- Rick Rule, Sprott's Thoughts
- · Chris Thompson, eResearch
- For a complete schedule, visit www.pdac.ca/convention/ letterwriterpresentations in January.



# Strength in Numbers. Join our Community

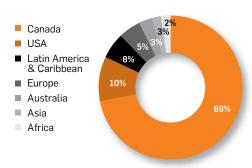
Become a member of the leading mineral industry association and help strengthen our global voice! To learn more about PDAC or to discuss the benefits of membership, contact us at **info@pdac.ca**.

JOIN NOW by visiting our website at pdac.ca/members.

**7,500**PDAC Members

Prospectors
Geo-consulting Services
Junior Exploration Companies
Mid-tier/Major Mining Companies
Legal/Financial/Investment Firms
Service and Equipment Suppliers

Government Sector Education Sector Students & Early Career Engineering Services Environmental Services Industry Associations



53%

of our Canadian members reside in the province of Ontario, followed by 23% in British Columbia and 10% in Quebec



103
countries
represented
by members
of the PDAC

## **NEW! EXPANDED MEMBER BENEFITS PROGRAM**

- Exclusive Webinars: Information and insights on key topics related to the mineral sector
- PDAC Connect: Web-based platform for year-round dialogue, information-sharing and networking between members

#### **INDIVIDUAL BENEFITS**

**Advocacy** – the PDAC takes the interests and concerns of its members to governments, international institutions, communities and other stakeholders, to support a competitive and responsible mineral exploration industry

**Networking** – individual and corporate member representatives enjoy substantial discounts on registration to participate in the PDAC's Annual Convention, regarded worldwide as the premier event for the mineral industry community

**Communications** – members are kept informed of the PDAC's initiatives and advocacy work that support the minerals industry, and are provided updates on current news and information

#### **INDIVIDUAL FEES**

\$90.48
\$166.67
\$19.05
\$19.05

#### **CORPORATE BENEFITS**

- Member rate on exhibit booths in the Investors Exchange or Trade Show
- Company profile featured on PDAC website
- Company showcased as a corporate member at the PDAC Convention
- 15% discount on an annual subscription to post jobs on pdacjobs.com network
- One complimentary individual membership
- Specially tailored insurance and benefits program exclusive to PDAC members: consultants package, mining/contractors package, group benefits program
- Current news and information about the industry and the Association through our communication platforms: monthly eNews, quarterly publication CORE, quarterly video updates, annual report

#### CORPORATE FEES

Junior Mining	\$350
Non-Mining	\$350
Class A-E	\$12,000-\$952.38
(fees based on market cap)	

# PDAC 2020 SPONSORS

**DIAMOND SPONSOR** 





**PLATINUM SPONSORS** 





**MINING COUNTRY SPONSORS** 







**PATRON SPONSORS** 















**PREMIER SPONSORS** 









# **PDAC 2020 SPONSORS**

**GOLD PLUS SPONSORS** 



















**GOLD SPONSORS** 





















**BRONZE SPONSORS** 



**RBC Capital Markets** 





Peter **Bojtos** 





# PDAC One on One **Meeting Program**

By invitation only

# **TUESDAY, MARCH 3 WEDNESDAY, MARCH 4**

South Building, Level 700

Sponsored by



PDAC has partnered with Precious Metals Summit Conferences, LLC to offer professionally organized one-onone meeting services to bring qualified investors together with senior management. Meetings are 25 minutes in duration and take place in private meeting rooms, providing investors the opportunity to efficiently conduct meetings and derive maximum value from their time spent at the convention. This exclusive program is available only to a select group of PDAC 2020 Investors Exchange exhibitors, carefully screened, qualified investors and portfolio managers from around the world.

Advance registration is required. For more information, please visit www.pdac.ca/convention/programming/ pdac-one-on-one-meeting-program



# **Presentation Rooms**

Entrance requirements to individual Presentation & Reception rooms vary.

For room description and registration requirements, visit www.pdac.ca/convention/presentationandreceptionrooms

North Building, Level 200

Attend a Presentation Room to interact with countries and companies as they provide up-to-date information on their mining jurisdictions, products and services.

## **Confirmed presentations**

- AMIRA International
- · Argentina, Government of
- Atlantic Canada Mining Alliance
- Australia Minerals
- BMC Minerals
- · Brazil, Official Delegation of
- · Canada Eurasia Russia Business Council (CERBA)
- · Canadian Nuclear Laboratories
- · Canada-Peru Chamber of Commerce
- · Chile, Ministry of Mining and Trade Commission of
- · Colombia, Government of, National Mining Agency
- Dentons LLP
- Descartes Labs
- FRM
- European Union
- · German Mineral Resources Agency (DERA) in the Federal Institute for Geosciences and Natural Resources (BGR) in cooperation with the Canadian German Chamber of Industry and Commerce
- · Greenland, Government of, and Greenland Business Association
- Guyana Goldfields Inc.
- · India, Government of, Ministry of Mines
- Invest Barbados
- Invest Canada North
- · Invest in Canada
- · Ireland, Geological Survey of
- Lundin Group of Companies
- McCarthy Tétrault
- · McKinsey & Company
- Mongolia, Ministry of Mining and Heavy Industry
- · Montt Group SpA
- · Mundoro Capital Inc.
- · Natural Resources Canada, Geological Survey of Canada
- · South Africa, Department of Mineral Resources
- · Three Crowns LLP

# MINING COUNTRY SPONSORS

pdac.ca/convention/miningcountrysponsors







# **PERU DAY**

Monday, March 2 **Room 107** 

**BOOTH 1423** 

# **BRAZIL DAY**

Monday, March 2 Room 206D

**BOOTH 1303** 

# CANADA DAY

Monday, March 2 Room 105

**BOOTH 539** 

# **Reception Rooms**

**♥** North Building, Level 200

The following groups have confirmed:

- · European Union
- Glencore Technology
- PhotoSat
- · Whittle Consulting

For Presentation & Reception Room rental availability, contact Ariya Andrighetti at aandrighetti@pdac.ca or 416 362 1969, ext. 234.



# Short Courses Admission with ticket

The Professional Geoscientists Ontario (PGO) supports participation of its members in these courses as an acceptable Continuing Professional Development activity. This program may also be eligible toward the Law Society of Upper Canada's CPD Requirement as Substantive Hours. Please note that this program is not accredited.

Space is limited for Short Courses. Register early to avoid disappointment. All Short Courses take place in the MTCC, South Building.

PDAC reserves the right to cancel Short Courses that do not meet minimum attendance requirements. To qualify for student rates, you must be a PDAC student member and enrolled full time in a recognized academic program. Student spaces are limited.

Unless otherwise noted, all full-day Short Courses include continental breakfast, three-course lunch and refreshments.

## FRIDAY, FEBRUARY 28

8:30 am - 4:30 pm

## **Minimizing environmental impact**

**ORGANIZER:** Golder Associates Ltd.

The aim of this course is to assist exploration companies to minimize the impact of their field operations on the environment, and in so doing lay down foundations for acquiring a "social licence to operate" from local communities, government agencies and other stakeholders, reduce costs, and add value. Using parts of the environmental toolkit from PDAC's online guidance, e3 Plus: A Framework for Responsible Exploration, and drawing on the expertise of experienced practitioners, the course will emphasize the practical aspects of operating in the field. Attendees will receive a sound grounding in what are the potential environmental impacts, and related mitigation and management measures, associated with exploration field operations. It is intended that this course, and the PDAC Health and Safety Course, are separate but complimentary.

The objective is to cover the main topics relating to mineral exploration impact on the environment from the point of view of an active mineral exploration program, including camp construction and management, access trails and roads, water resources, waste management, regulatory considerations and supporting governance for drill programs. Some aspects of community engagement related to environmental stewardship will be referred to but community relations are not be the focus of this course. It will be a how-to course both for those starting out in their exploration careers and for more experienced people who want to update their knowledge. Participants could include geologists, diamond drillers, camp operators, and others.

Speakers will include geologists, environmental experts, and a senior diamond drill company representative—all with decades of experience and knowledge in field operations.

The course should appeal to Canadian and international participants.

#### PRESENTERS:

Amiel Blajchman, Cedar Water Strategy Tim Bremner, Foraco Canada Ltd. David Brown, Golder Associates Ltd. Bill Mercer, Avalon Advanced Materials Inc. Mark Wiseman, Avalon Advanced Materials Inc.

#### **LEVEL OF COMPREHENSION: ENTRY LEVEL**

Some knowledge of e3 Plus (available free of charge at www.pdac.ca/e3plus) would be helpful but not essential.

Includes course material, continental breakfast and lunch

Rates			
Member	\$74.99	Non-Member	\$169.99
Student	\$37.99		

PDAC is pleased to offer this course at a special rate as part of the association's ongoing leadership in sustainability and its commitment to improving responsible exploration.



#### 8:30 am - 4:30 pm

# An in-depth overview of US mining law relating to acquiring, developing, permitting, financing and closing hard rock mining claims and projects.

## ORGANIZER: Parsons Behle & Latimer

This full-day course is a comprehensive overview of the mining law in the United States relating to the acquisition, exploration, development, operation and closure of hard rock mining projects. The course will provide in-depth coverage of types of land and mineral ownership in the US, types of mineral claims, historical and current issues under the Mining Law of 1872, the process and issues involved in obtaining, holding and financing mineral tenures, an overview of water law in the Western US, and issues relating to acquisition and generation of electrical power for the operation. The course will include an overview of the typical methods for entering into exploration and development joint venture arrangements. including the revised Rocky Mountain Mineral Law Foundation "Form 5" limited liability company agreement, lease, purchase and sale of exploration and mining project issues, as well as discussion of the standard royalty mechanisms, including net smelter return and net profits interest royalties.

The course will also cover current significant environmental issues in the exploration and development of operations, including key air and water discharge issues, environmental impact statements, permitting of tailings facilities, bonding, and mine closure and reclamation issues. Attendees will leave with an excellent foundation for understanding the major issues involved in acquiring, holding, financing and developing mining interests in the US and the related environmental, water, power and closure issues. The course is ideal for persons who are interested in acquiring mining projects in the US, or simply wish to have a refresher on key concepts.

#### PRESENTERS:

Richard J. Angell, Parsons Behle & Latimer Chad C. Baker, Parsons Behle & Latimer Rew R. Goodenow. Parsons Behle & Latimer Kevin W. Johnson, Parsons Behle & Latimer Gregory H. Morrison, Parsons Behle & Latimer Jason D. Steiert, Parsons Behle & Latimer

#### **LEVEL OF COMPREHENSION: ENTRY-LEVEL**

#### **COURSE FEE:**

Early Rate			
Member	\$449.99	Non-Member	\$549.99
Regular Rat	:e		
Member	\$649.99	Non-Member	\$749.99
Student	\$219.99		

#### 8:30 am - 5:00 pm

## Mining financial modeling

**ORGANIZER:** The Marquee Group

This is an interactive, hands-on course focused on the skills required to create a best-in-class financial model of a mining project. The course is case-based and uses an example of a company developing an open-pit mine. Issues related to mining, milling and processing will be covered in the course. A powerful scenario page is included to test sensitivities to key drivers. The model includes detailed schedules for mining sequencing, production, operating costs, capital costs and reclamation costs. Valuation concepts covered include net present value, internal rate of return, and payback period. Participants will learn the best practices for designing and building financial models of a mining projects.

They will also come away with many new intermediate and advanced Excel skills commonly used in financial models. Upon course completion, all the participants will take away a completed model that can be used as a template on future mining projects.

#### PRESENTER:

Duncan McKeen, The Marquee Group

#### **LEVEL OF COMPREHENSION: INTERMEDIATE**

Participants should have basic knowledge in mining, accounting, finance and Excel. Participants are required to bring a laptop (PC preferred) equipped with MS Excel to the course.

Early Rate			
Member	\$499.99	Non-Member	\$599.99
Regular Ra	te		
Member	\$699.99	Non-Member	\$799.99
Student	\$269.99		

# **Short Courses** Admission with ticket

## **FRIDAY, FEBRUARY 28**

9:00 am - 5:00 pm

## **Geological interpretation of** aeromagnetic data

**ORGANIZER:** Southern Geoscience Consultants

This introductory course aims to enlighten participants on the strengths and weaknesses of potential field methods, and to illustrate how best they can be used to progress exploration programs. This course is designed for the geologist who wants to improve their understanding of aeromagnetics and the geophysicist who wants to improve their understanding of the geology responsible for aeromagnetic anomalies.

This is an introductory day designed to inform attendees of the range of applications of aeromagnetic data and the key steps involved in the integration of aeromagnetic data with geology. Participants will be introduced to the concept of mapping geology and structure as expressed in the magnetic response to develop a lithostratigraphic interpretation using aeromagnetic data through hands-on exercises.

#### PRESENTERS:

David Isles. Southern Geoscience Consultants Anne Tomlinson, Southern Geoscience Consultants

#### **LEVEL OF COMPREHENSION: INTERMEDIATE**

Participants should have a general knowledge of geology. general knowledge or exposure to aeromagnetic data.

#### COURSE FEE:

Early Rate			
Member	\$449.99	Non-Member	\$649.99
Regular Rat	е		
Member	\$549.99	Non-Member	\$749.99
Student	\$269.99		

Friday, February 28 8:30 am - 4:30 pm Saturday, February 29 8:30 am - 4:30 pm

## **Concepts and application of machine** learning to mining geoscience: A practical course

**ORGANIZER:** SRK Consulting (Canada)

Over the last five years machine learning (ML) has been a growing subject of conversation in the mining industry. From targeting of mineral deposits to connected mining environment, there is no doubt that artificial intelligence will play a key role in our industry in the near future. However, the subject can seem obscure and is often hard to grasp, which creates apprehensions from geoscientists. This workshop will introduce the participants to the applications and evaluation of machine learning in mining geoscience. The main concepts and best practices for applied machine learning to exploration and mining will be reviewed. The course will be set in a practical framework, with a focus on the understanding and usage of different algorithms without detailing the mathematics behind each algorithm. Through a series of case studies, examples and hands-on exercises the attendees will learn how to best apply machine learning to different datasets and most importantly, evaluate the results produced by the algorithms.

#### PRESENTERS:

Antoine Caté, SRK Consulting (Canada) Jean-Philippe Paiement, Mira Geoscience Erwan Gloaguen, INRS Martin Blouin, Geolearn

#### **LEVEL OF COMPREHENSION: INTERMEDIATE**

Participants should have a strong interest in either statistics, modelling or data analysis. No prior coding or data science knowledge is required. Exercises will be completed using a user-friendly and intuitive interface for data mining and machine learning. Participants are required to bring a laptop.

Early Rate			
Member	\$699.99	Non-Member	\$799.99
Regular Ra	te		
Member	\$899.99	Non-Member	\$999.99
Student	\$399.99		

Friday, February 28 8:30 am - 4:30 pm Saturday, February 29 8:30 am - 4:30 pm

## Gold: Geology, geochemistry, genesis and exploration

**ORGANIZER:** Society of Economic Geologists (SEG)

This two-day-long workshop will focus on the present day understanding of the most widespread mineral deposit types that host much of the global gold resource. Leading experts will provide descriptions on some of the most important examples of each deposit type, with detailed material on tectonic and structural controls, geological characteristics, geochemical and geophysical signatures, geochronological relationships, and exploration strategies. Presented material will include characterization of orogenic gold deposits, low and high sulfidation epithermal gold deposits, gold-rich porphyry deposits, Carlin-type, and intrusion-related gold systems. The most up-to-date evidence for ore-formation processes and development of genetic models for these various deposit types will be described. The course is aimed for geoscientists from both industry and academia, as well as students of economic geology, who desire a comprehensive understanding of modern concepts on the geology of gold deposits.

#### PRESENTERS:

Richard J Goldfarb, China University of Geosciences & Golden Predator Mining Corp.

Stuart F. Simmons, Hot Solutions Ltd.

#### LEVEL OF COMPREHENSION: ADVANCED

#### COURSE FEE:

Early Rate			
Member	\$899.99	Non-Member	\$999.99
Regular Ra	ite		
Member	\$1,099.99	Non-Member	\$1199.99
Student	\$399.99		

Friday, February 28 9:00 am - 5:00 pm Saturday, February 29 9:00 am - 5:00 pm

## Will this exploration project become a mine?

#### **ORGANIZER: RPA**

There are many decisions that need to be made early on in exploration projects. Should we continue drilling? What grade and tonnage do we need to make this into an economic project? How would we develop this project? These questions can usually be answered early on in the development cycle, and the answers can provide valuable guidance on making a decision to continue investing or to walk away from a project.

This course is designed to give insight into early stage projects from a mining engineer's perspective. We will look at all the key aspects required for determining early stage cost estimates. including: mining method selection, processing methods, infrastructure requirements, environmental management, and social licence. We will also review key inputs to revenue, including: metal prices, metallurgical recoveries, payable metal, transport costs, treatment and refining charges, and royalties.

Ultimately, we will be able to use this information to develop an early stage cash flow that will give us an indication of a project likelihood of success.

#### PRESENTERS:

Jason Cox, RPA Ian Weir. RPA David Robson, RPA David Ritchie, SLR Elise Ho-Foong, SLR Lance Engelbrecht, RPA

#### **LEVEL OF COMPREHENSION: ALL LEVELS**

This course is primarily designed for geologists, executives and investors. Participants are requested, but not required, to bring a laptop.

Early Rate			
Member	\$699.99	Non-Member	\$799.99
Regular Rat	е		
Member	\$899.99	Non-Member	\$999.99
Student	\$349.99		

# **Short Courses** Admission with ticket

## **SATURDAY, FEBRUARY 29**

8:00 am - 4:30 pm

## **Health & safety for mineral exploration**

ORGANIZER: Bill Mercer, Avalon Advanced Minerals Inc.

The objective of the course is to give participants sufficient training in understanding what the typical risks are in mineral exploration, how to run a simple risk assessment, an introduction to accident root cause analysis, as well as the gathering and use of H&S statistics and some emphasis on the special higher risks associated with drilling (accidents) and helicopters (fatalities). For the more experienced participants, they will understand what a company should have in place to implement effective, high level H&S practices from the Board level to operations.

Participants will have enough information to start a health and safety (H&S) program, and given one existing at their company, they will understand better what a H&S program is attempting to achieve. The course is suitable for people with a range of experience levels. Speakers include seasoned experts in H&S from exploration, management, drilling and aviation (helicopters).

#### PRESENTERS:

Bill Mercer, Avalon Advanced Materials Inc. Mark Wiseman, Avalon Advanced Materials Inc. Jimmy Barrieau, Boart Longyear Corey Taylor, Universal Helicopters

#### **LEVEL OF COMPREHENSION: ALL LEVELS**

#### COURSE FEE:

Includes course material, continental breakfast and lunch

Rates			
Member	\$74.99	Non-Member	\$169.99
Student	\$37.99		

The PDAC is pleased to offer this course at a special rate as part of the association's ongoing leadership in Health & Safety and its commitment to improving responsible exploration.

#### 9:00 am - 4:30 pm

# **Environmental intelligence: A tool box to** decrease risk, improve performance and increase bottom line performance

#### **ORGANIZER:** EcoMetrix

The environment factors into every stage of the mine life cycle. Forward-thinking companies understand this and make the environment part of their overall corporate strategy, with the benefits being accurate financial forecasting, optimized resource allocation, and enhanced social license. This course encourages participants to think proactively about the environment — in a unique way. The course introduces environmental intelligence, focusing on behaviours we see as critical to successful outcomes. We distill behaviours into a tangible tool-box to plan, manage and ensure project success. The course has been taught previously with broad appeal from senior level mining executives, regulators, environmental practitioners/consultants and students — and has established industry wide that:

- 1. It is critical to develop a clear conceptual model of the project up front to avoid costly errors;
- 2. Strategies are required to move from data collection to clear communication of outcomes:
- 3. Implementation strategies for company-wide review of environmental performance are required to anticipate risks.

#### PRESENTERS:

Elizabeth Haack, EcoMetrix Sarah Barabash, EcoMetrix Lesley Warren, University of Toronto Brent Murphy, Seabridge Gold

#### **LEVEL OF COMPREHENSION: ALL LEVELS**

Early Rate			
Member	\$449.99	Non-Member	\$549.99
Regular Ra	te		
Member	\$649.99	Non-Member	\$749.99
Student	\$219.99		



#### 9:00 am - 4:30 pm

## **Greenstone belt architecture and metal** endowment within the Abitibi Terrane

**ORGANIZER:** Mineral Exploration Research Centre (MERC)

The course will focus on the gold and base metal endowment of Archean granite to greenstone terranes within the Superior Craton at regional to camp and deposit scales utilizing integrated 4D architecture interpretations derived from surface geology, geochronology and geophysical surveys. The course will highlight new results from Laurentian University's Metal Earth program where in excess of 1,000 km of reflection seismic, magnetotelluric and gravity surveys have provided some of the highest resolution crustal imaging across transects of up to 130 km in length within the Abitibi and the Wabigoon terranes. The geophysical studies are complemented by studies at craton to transect scales, which emphasize integration of field, laboratory, geochemical and isotopic results providing new insights into the geological and metallogenic framework of Archean granite to greenstone terranes, their relationship to metasedimentary terranes, the mantle metal reservoirs underlying granite-greenstone terranes, and the architecture of the structural conduits controlling endowment via upward migration of melts and mineralizing hydrothermal fluids. The course will consist of presentations by Metal Earth's principal investigators and researchers.

#### PRESENTERS:

Ross Sherlock, Laurentian University David Snyder, Laurentian University Lucy Mathieu, Laurentian University Rasmus Haugaard, Laurentian University Xiaohui Zhou, Laurentian University Kate Rubingh, Laurentian University Zsuzsanna Toth, Laurentian University Taus Jøergensen, Laurentian University

#### **LEVEL OF COMPREHENSION: INTERMEDIATE**

Participants should have a BSc in Geology.

Early Rate			
Member	\$499.99	Non-Member	\$599.99
Regular Rat	е		
Member	\$699.99	Non-Member	\$799.99
Student	\$259.99		

# Short Courses Admission with ticket

# **SATURDAY, FEBRUARY 29**

Saturday, February 29 Sunday, March 1

8:30 am - 4:30 pm 8:30 am - 12:00 pm

## Fundamentos de estimación de recursos minerales



**ORGANIZER: RPA** 

RPA and the PDAC will present the popular Fundamentals of mineral resource estimation course in Spanish.

Este curso, presentado por un equipo de expertos profesionales de RPA, introduce los fundamentos de estimación de recursos minerales. El contenido se ha preparado para una audiencia de geólogos de exploración y mina ya que estos son los principales responsables en el descubrimiento, definición y producción de depósitos minerales. El propósito de este curso es delinear los componentes clave y las consideraciones de importancia en la estimación de recursos minerales para que la audiencia pueda incorporar lo aprendido a su trabajo.

El curso comienza con bases de datos de perforación y avanza cubriendo dominios de recursos, análisis de tendencias, análisis exploratorio de datos, técnicas de estimación, cálculo de leyes de corte y criterios de clasificación. Se explorarán consideraciones específicas para el modelo de recursos minerales, incluyendo aspectos prácticos como el método de minado propuesto y el equipo, así como aspectos geoestadísticos tales como criterios en la selección adecuada de dominios. RPA explicará los fundamentos y la importancia de cada paso, y mencionará riesgos y errores comunes.

Los ejercicios que complementan el contenido del curso pueden incluir: interpretación geológica, verificación de base de datos, tratamiento de valores extremos, cálculo de leves de corte, análisis exploratorio de datos, estimación de ley de bloques, estrategias para elipses de búsqueda, clasificación y verificación de modelos de bloques.

#### PRESENTADORES:

Sean Horan, RPA Jose Texidor Carlsson, RPA Rosmery Cardenas, RPA Ian Weir, RPA

#### NIVEL DE COMPRENSIÓN: PRINCIPIANTE A INTERMEDIO

Los participantes deberían tener un entendimiento de depósitos minerales y un nivel básico de exploración minera, incluyendo perforación.

#### PRECIO DEL CURSO:

Incluye material del curso, desayuno continental el Sábado y el Domingo, almuerzo de tres platos el Sábado y café ambos días.

Early Rate			
Member	\$699.99	Non-Member	\$799.99
Regular Rate	е		
Member	\$899.99	Non-Member	\$999.99
Student	\$399.99		



## **SUNDAY, MARCH 1**

#### 8:00 am - 12:00 pm

## Public reporting, professional practice, and industry guidance: Meeting expectations of securities regulators

#### **ORGANIZER:** Ontario Securities Commission

While NI 43-101 is the "public face" of mining disclosure in Canada, there are several key organizations that play a significant role in the overall stability of the mining disclosure rule. This course will discuss the interdependence of securities regulators, professional geoscience regulators, and technical societies in maintaining the confidence in public reporting.

NI 43-101 sets minimum standards for disclosure—it does not prescribe how exploration programs are designed and executed or how mineral resource and mineral reserve estimates are prepared. This means the qualified person, with the required technical competence, relevant experience, and professional ethics plays a critical role in upholding the success, or failure, of the disclosure regime. Presenters from Professional Geoscientists Ontario will cover the ethical obligations of professional geoscientists, including procedures when practitioners fail in their duty to uphold or protect the public interest, Members from the CIM Best Practice Committee will discuss recent updates to the best practice guidance documents for mineral exploration and estimation of mineral resources and mineral reserves. Securities regulators will present findings from recent compliance reviews, particularly disclosure of mineral resource estimates in technical reports.

#### PRESENTERS:

Craig Waldie, Ontario Securities Commission James Whyte, Ontario Securities Commission Reno Pressacco, CIM Mineral Resource and Mineral Reserve **Best Practices Committee** John Ryder, Chair, Professional Geoscientists Ontario

#### **LEVEL OF COMPREHENSION: ALL LEVELS**

Participants should have a basic understanding of NI 43-101.

#### COURSE FEE:

Includes course material, hot buffet breakfast and refreshments

Rates	Rates					
Member	\$199.99	Non-Member	\$239.99			
Student	\$129.99					

## **WEDNESDAY, MARCH 4**

#### 8:30 am - 4:30 pm

## **Qualitative and quantitative prospectivity** mapping and assessment of undiscovered mineral resources

#### **ORGANIZER:** Beak Consultants GmbH

This short course provides an overview of several commonly used knowledge- (conceptual) and data-driven (empirical) methods for qualitative mineral prospectivity mapping (MPM), and the three-part methodology for quantitative mineral resource assessment (OMRA) of undiscovered mineral resources. The development and integration of these methods are reviewed, including theoretical underpinnings, practical implementation and recently developed software tools. Workflows and best-practices based on case studies in the USA, Finland, Sweden, Greenland and Germany are demonstrated and discussed.

The short course will provide the participants with:

- 1) a knowledge of the commonly used methods;
- 2) an understanding of the basic principles of these methods;
- 3) an understanding how the methods can be applied; and,
- 4) an understanding of the possibilities and limitations of the methods.

More importantly, the course will focus on the practical demonstration of the methods by introducing selected software tools and highlighting results that can be acquired by using these tools.

#### PRESENTERS:

Joshua Coyan, United States Geological Survey (USGS) Vesa Nykänen, Geological Survey of Finland (GTK) Johanna Torppa, Geological Survey of Finland (GTK) Kalevi Rasilainen, Geological Survey of Finland (GTK) Simon Mose Thaarup, Geological Survey of Denmark and Greenland (GEUS)

Andreas Brosig, Beak Consultants GmbH Andreas Knobloch, Beak Consultants GmbH Jens Rönngvist, Scandinavian GeoPool

#### LEVEL OF COMPREHENSION: ENTRY-LEVEL, INTERMEDIATE

Participants should have a basic understanding of the concepts of GIS (geographic information systems).

Early Rate	ly Rate					
Member	\$499.99	Non-Member	\$599.99			
Regular Rate						
Member	\$699.99	Non-Member	\$799.99			
Student	\$249.99					

# **Short Courses** Admission with ticket

## **WEDNESDAY, MARCH 4**

2:00 pm - 5:30 pm

## The value proposition for geophysics: It's not just discovery

**ORGANIZER:** Condor Consulting

The minerals exploration industry services the larger mining industry to primarily locate and define new resources, as well as to help mining firms undertake the cost-effective exploitation of nature resources from development, through to production, and then mine closure and remediation. Within the minerals exploration industry, the geophysical component of this is a large, and in many ways guite complex, subcommunity, made up of a number of generally privately-held companies with numbers ranging from the singular for many consulting groups to 125-150 for the larger service companies offering ground and airborne services.

The mining companies themselves employ a number of geoscientists who apply their talents to the task of seeking greenfield opportunities, evaluating submissions from third parties, or assisting the with geoscience tasks on the company's own deposits. Geophysical staff, outside contractors or consultants have the opportunity to add value in all aspects of the task cycle, but their contributions in a fiscal sense are seldom cited beyond when actually discoveries are made. In such situations, it has historically been very difficult to apportion what could be considered fractional contributions to success. The client for the work seldom seems to have much interest in how the discovery comes to pass, or if they do, it's a personal memory that will either fade with time or be carried off with the individual.

These difficulties in documenting outcomes using geophysics does not mean this has not been done, and part of the workshop will be to review the role of geophysics going back to the start of the 20th century. Following this review, the remaining speakers will endeavor to define in a variety of sub-areas, how in the modern geophysics is adding significant value to the mining industry. This sort of information potentially has significant value to stakeholders, investors, others in the minerals geoscience profession, governments, academia and end-users of geophysical services.

#### PRESENTERS:

Richard Schodde, MINEX Ken Witherly, Condor Consulting Rob Gordon, Quantec Geoscience Ltd. Joel Jansen, Anglo American Daryl Ball, Glencore Canada Jon Woodhead, JAW Consulting

#### **LEVEL OF COMPREHENSION: ALL LEVELS**

COURSE FEE:

Includes course material and refreshments

Rates				
Member	\$199.99	Non-Member	\$239.99	
Student	\$129.99			



# Student & Early Career Program

Student All Access Pass required (unless otherwise noted)

Student & Early Career Centre How to impress for success Flash mentoring Student-Industry Networking Luncheon

Sponsored by

# **LUNDIN**GROUP

### **CONVENTION TRAVEL FUNDING**

The PDAC has established a travel fund to help student groups cover some of the costs associated with travelling to Toronto to attend the convention. Funding is allocated on a first-come, first-served basis and available to student members in good standing. The application is available at www.pdac.ca/students/pdac-convention-2020

### **VOLUNTEER OPPORTUNITIES**

Save money and network with industry professionals during the convention! Volunteer your time in exchange for a complimentary Student All Access Pass, a ticket to the Student-Industry Networking Luncheon, a gift card, food vouchers and more. Sign up today at www.pdac.ca/convention/volunteers

#### STUDENT & EARLY CAREER CENTRE

The Student & Early Career Centre will be located on Level 800 across from the Trade Show entrance. This hub will host Resumé Review sessions, registration for the guided tours of the Trade Show and Investors Exchange, and information on other engagement opportunities.

# **RESUMÉ REVIEW**

Sign up onsite at the Student & Early Career Centre for a consultation with a geoscience professional who will review your resumé and discuss personalized networking techniques. Students are encouraged to bring a copy of their resumé to the session. Sessions will run from March 1-4.

**♀** South Building, Level 800

### **PDAC-CIM Toronto Branch Guided Tours**

Sign up at the Student & Early Career Centre

Meet some of the 1,100+ companies that exhibit in the Trade Show and Investors Exchange by taking a guided tour of the exhibits. Each tour stop will allow you to learn about the focus of the organization's projects and potential career opportunities.

Sunday, March 1 1:00 pm

Monday, March 2 10:00 am and 1:00 pm Tuesday, March 3 10:00 am and 2:30 pm

# **SATURDAY, FEBRUARY 29**

South Building, Level 700

9:00 am - 5:30 pm

# **Prospect Generation Challenge**

Hosted by Next Gen Geo and PDAC, this is a "Dragons' Den" style event for students and early-career geoscientists to pitch their original ideas for mineral exploration prospects.

Five finalists will be chosen in advance for each of the two categories (undergraduate and early career). They will compete for cash prizes and investment as they present their ideas to the judges and an audience. Visit the website for more information

www.nextgengeo.ca/index.php/programs/challenge/

# Student & Early Career Program

Student All Access Pass required (unless otherwise noted)

## **SUNDAY, MARCH 1**

South Building, Level 700

10:30 am - 12:00 pm

### **How to impress for success**

An interactive event designed to help students and graduates effectively and confidently navigate their way around the convention. Attendees will practice networking techniques for meaningful interactions and learn what types of guestions to ask and most importantly, how to follow up after an event. The presentation is suitable for students, graduates and professionals.

### 2:00 pm - 4:00 pm

### Flash mentoring

This is an opportunity to meet mentors and mentees in the PDAC's Mentoring program, expand your network and connect with industry professionals. Flash mentoring is a one-time meeting and discussion with industry mentors. This event is open to third- and fourth-year undergraduates, final year college students, graduate students, and students who have graduated within the last two years. Registration information will be posted at www.pdac.ca/convention/programming/student-earlycareer-program in January.

# **MONDAY, MARCH 2**

South Building, Level 700

9:30 am - 11:30 am

# Deal or no deal: The art and science of project strategy

This is an interactive experience for students and early-career individuals to gain an understanding of how decisions are made at the management level and what it takes to advance a mineral exploration project. Role-playing as managers, participants will work through a strategy exercise with their team with the goal of maximizing the value of the project.

1:30 pm - 4:00 pm

**♥** North Building, Level 200

# A student geologist's guide to the exploration and mining industry

This event is designed to help students successfully transition from the classroom to the workforce. Speakers from various areas of the industry will share their experiences and discuss what they look for when hiring students and recent graduates. Participants will also gain insight into understanding the economics of the sector, expectations of your first job, pitfalls to avoid, and the lifestyle associated with working in exploration and mining.

## **TUESDAY, MARCH 3**

**♀** South Building, Level 700

10:00 am - 6:00 pm

# **PDAC-SEG Student Minerals Colloquium**

Open to all pass types

The Student Minerals Colloquium (SMC) brings together geoscience students and industry professionals to highlight innovative student research on projects essential for the successful evolution of the modern mining industry. This event provides industry professionals with an opportunity to support and stay current with ongoing international research from students across the world. Please join us in celebrating future leaders in mineral deposits, geophysics, environmental sustainability, and experimental studies at this year's SMC.

Present your research at the convention! Submit your abstract by January 12 at www.merc.laurentian.ca/seg-smc

### 11:30 am - 1:30 pm

**♥** North Building, Level 100

### **Student-Industry Networking Luncheon**

RSVP when you register for the convention

This reception-style buffet luncheon provides an opportunity for students, early career and industry professionals to network in a relaxed environment. The winner of the Mary-Claire Ward Geoscience Award and the Joan Bath and Peter Howe Bursary for Advancement in the Mineral Industry will be announced, as well as the selected 2020 Student-Industry Mineral Exploration Workshop (S-IMEW) students.

# Sustainability Program All Access Pass required

**SUNDAY. MARCH 1** 

**♀** South Building, Level 800

9:30 am - 10:50 am

Artisanal small scale mining strategies for addressing risks and challenges

**ORGANIZER:** Yamana Gold

11:00 am - 12:00 pm

Supply chain legislation: The benefits and constraints of legislative models on the sector

**ORGANIZER: UNICEF** 

1:30 pm - 3:30 pm

**Gender diversity and inclusion: Exploring the "how to" for improving gender** diversity and inclusion

**ORGANIZER: PDAC** 

# **TUESDAY, MARCH 3**

**♀** South Building, Level 700

9:00 am - 11:50 am

Standards and measurements for performance: Exploring frameworks and principles

**ORGANIZER:** Mining Association of Canada

1:30 pm - 2:50 pm

**Environmental. social and corporate** governance: The impact of ESG's on investment, reporting and operating practices

**ORGANIZER:** Mining Association of Canada

3:00 pm - 4:30 pm

Climate change impacts on biodiversity: **Considerations for the sector** 

# **WEDNESDAY, MARCH 4**

**♀** South Building, Level 800

9:00 am - 9:50 am

**Tailings: Performance and regulatory** considerations

**ORGANIZER:** International Council on Mining and Metals (ICMM)

10:00 am - 12:00 pm

**Sustainability Spotlight: A series of** rapid-fire presentations on various topics related to sustainability

For a complete schedule, visit www.pdac.ca/convention/ programming/sustainability-program in January.



# **Tuesday • March 3**

Celebrate excellence in the global mining industry!

Enjoy a hosted reception, a sumptuous gourmet dinner, fine wines, followed by complimentary cocktails, dancing and plenty of time for networking at the After Party.



# Purchase your tickets now!

pdac.ca/convention

See page 16 for further details.

# **PROUD SPONSORS**

**AWARDS GALA** 

**DINNER WINE** 

RECEPTION & AFTER PARTY







# Technical Program All Access Pass required

Need professional development hours to maintain your designation? Upon request, PDAC will provide a Technical Session certificate of attendance to help you meet your professional development requirements.



Sponsored by



## **SUNDAY, MARCH 1**

South Building, Level 700

# **OPENING CEREMONIES**

Open to all pass types

10:30 am - 11:30 am

Join Felix Lee, PDAC President and other special quests as we mark the official opening of the 2020 Convention.

# **SUNDAY, MARCH 1**

1:00 pm - 5:00 pm

Commodities and market outlook

Sponsored by

# **RBC CAPITAL MARKETS SCOTIABANK**

CHAIRS: Terence Ortslan, TSO & Associates, Montreal & Mark Selby, Selby & Co., Toronto, Canada

The corporate world of the next decade, Marie Inkster & Ron Hochstein, Lundin Mining Corporation

Overview of world mineral exploration trends, Mark Ferguson, S&P Global Market Intelligence

Zinc, Megan Degelman-Smith, Teck Resources Limited

Copper, Vanessa Davidson, CRU Group

Base metal concerns: A blended future, Ryan Cochrane, Open Mineral

Precious metals, Nicky Shiels, Scotiabank

Battery materials, Ken Hoffman, McKinsey & Company

Steelmaking raw materials, Matthew Piggott, S&P Global Market Intelligence

Uranium, Nick Carter, UxC LLC

1:00 pm - 3:30 pm

# **Mining investment: How to** navigate the changing landscape

CHAIRS: Valerie Wilson, RPA & Susan Muir, Mkango Resources Ltd., Toronto, Canada

The effect of institutional investors' structural transformation on mining finance, Jeffrey Christian, **CPM Group** 

Top 10 ways for mining companies to attract money from investors, Chad Williams, Red Cloud Securities

How to communicate your story: An investor's perspective. Nawojka Wachowiak, 1832 Asset Management L.P.

Investing in growth: Barrick's key project parameters, Rob Krcmarov, Barrick Gold Corporation

Mining investment: What catches the banker's eye, Remko van der Water, ING Group

Tried and true strategies to effectively brand and market your story, Cathy Hume, CHF Capital Markets

# Technical Program All Access Pass required

# **SUNDAY, MARCH 1**

1:00 pm - 3:30 pm

### Recent advances in Archean geology

CHAIRS: Neil Gow, Independent Consultant, Burlington & David Ross, RPA, Toronto, Canada

Mining and mineral exploration potential in the Kingdom of Saudi Arabia, Al Workman, Watts, Griffis and McOuat Ltd.

Mineral systems of craton margins: Examples from Western Australia, Sandra Occhipinti, CSIRO

Scale integrated approach to understanding architecture and fertility in Archean cratons: Examples from Western Australia, Klaus Gessner, Geological Survey of Western Australia

Isotopic mapping of the continental crust: A new area selection tool, David Mole, Laurentian University

Metal earth in Chibougamau: Stratigraphy and magmatic-hydrothermal Cu-Au mineralization, Lucie Mathieu, Université du Québec à Chicoutimi (UQAC)

In-situ growth of the Superior Craton from isotopes in zircons: Implications for Archean geodynamics, granite-greenstone petrogenesis and magmatic Cu-Ni-PGE-Au systems, Katarina Bjorkman, Bjorkman Prospecting



# **MONDAY, MARCH 2**

9:00 am - 12:00 pm

# Trends in resource policies in The Americas: Opportunities and challenges



CHAIRS: Antoine Schwartzman, Orefinders, Toronto & Terence Ortslan, TSO & Associates, Montreal, Canada

Americas and Latin American exploration trends, Adam Webb, S&P Global Market Intelligence

Mining productivity, project opportunities and stakeholder challenges in Latin America, Sigurd Mareels, McKinsey & Company

Winning mining policies for the region, Ricardo Monte Alto, Wood MacKenzie

The mine environment in Brasil: Changes in rules and regulations, Luis Mauricio Azevedo, ABPM (Brazilian Association of Mineral Companies)

### 2:00 pm - 4:30 pm

# **Back to North America: New opportunities**

CHAIRS: John Morganti, Lucca Advisors Inc., Vancouver & Ted Reeve, Haliburton Mineral Services Inc., Toronto, Canada

Renewed exploration and development interest in North America: The numbers, Chris Galbraith, S&P Global Market Intelligence

Carlin style deposits in Nevada: Exploration activity and targeting criteria, John Muntean, Nevada Bureau of Mines and Geology

Greenstone belt architecture in the Abitibi and Wabigoon subprovinces: Controls on metal endowment, Ross Sherlock, Mineral Exploration Research Centre, Laurentian University

Porphyry copper-gold deposits in the Northern Cordillera: New insights for exploration, Craig Hart, University of British Columbia

Pursuit of Red Chris, British Columbia, Barton Suchomel, **Newcrest Mining Limited** 

Centerra's strategic purchase, Scott Perry, Centerra Gold Inc.

### 2:00 pm - 4:30 pm

### Metallurgy and processing revenue components of geometallurgy

CHAIRS: Valerie Wilson, RPA & Shuda Zhou, Orix Geoscience Inc., Toronto, Canada

Practical geometallurgy for investors, Stuart Saich, Promet101

Improving geomet understanding in a mature operating paradigm, Lucy Hollis & Bryan Rairdan, Teck Resources Limited

The importance of considering capital and operating costs when conducting metallurgical tests, Kathy Altman, RPA

Optimization of ore to metal value chain via geometallurgical modeling, Matti Talikka, Outotec

Geometallurgy as a platform for technical de-risking, Karin Olson Hoal, Cornell University

### 2:00 pm - 4:30 pm

### **Precompetitive data**

CHAIRS: Robert Hearst, Southern Geoscience Consultants. Toronto & Neil Gow, Independent Consultant, Burlington, Canada

Australia united: Making the world's best pre-competitive data even better, Richard Blewett, Geoscience Australia

Driving discovery in Australia's top end through world-leading pre-competitive data, Ian Scrimgeour, Northern Territory Geological Survey

Prospectivity models in support of Canadian mineral exploration, C.J.M. Lawley, Geological Survey of Canada

TELLUS: An Irish solution to a global resource problem. Eoin McGrath, Geological Survey of Ireland

Digital mineral exploration: Public geodata of Finland used for mineral prospectivity mapping, Vesa Nykäänen, Geological Survey of Finland (GTK)

#### 2:00 pm - 4:30 pm

### The business of diamonds: From rock to ring

CHAIRS: Patricia Sheahan, Consultant, Toronto & Jennifer Pell, Consultant, Vancouver, Canada

Financing of diamond projects: Where are the best opportunities for juniors?, James Campbell, Botswana Diamonds

Innovation in the diamond industry, Mpumi Zikalala, De Beers Group

The 'Midas Touch' for carbon: Turning tax dollars into diamonds with Big Data, Mark Hutchison, Consultant

Rough production and supply & demand, Paul Zimnisky, Consultant

Diamonds: The world's fastest growing man-made minerals, Chaim Even-Zohar, Consultant

### **TUESDAY, MARCH 3**

9:00 am - 11:30 am

## **Gold deposits of West Africa: Recent** discoveries and developments

CHAIRS: Reno Pressacco, RPA & Patti Nakai-Lajoie, Teranga Gold Corp., Toronto, Canada

Gold deposits of West Africa: Various styles of mineralization, controls on their location and discovery history, John Miller, BHP

The Fekola mine, Mali: An update on brownfield and regional exploration programs, Andrew Brown, B2Gold Corp.

The Boto deposit, Senegal: A discovery by persistence and not a day at the beach, Craig MacDougall, IAMGOLD Corporation

The Namdini deposit: The largest significant west African gold discovery in a decade, Kevin Tomlinson, Cardinal Resources Limited

Defining a world class gold deposit in the Sahara Desert at Tasiast gold mine, Mauritania, Richard Adofo, Kinross Gold Corporation

The Loulo-Gounkoto district and evaluation, Simon Bottoms, **Barrick Gold Corporation** 

# Technical Program All Access Pass required

# **TUESDAY, MARCH 3**

9:00 am - 11:30 am

## Technology metals 2020: Recent trends and opportunities

CHAIRS: Don Bubar, Avalon Advanced Materials Inc. & Don Hains, Hains Engineering Company Ltd., Toronto, Canada

Supply chains and battery minerals, Simon Moores, Benchmark Mineral Intelligence

Developments in cathode materials for Li-ion batteries, Dan Blondal, Nano One Materials Corp.

Manganese: The forgotten battery metal, Marco Romero, Euro Manganese Inc.

From mining to technology: The Zen Graphene journey, Francis Dube, ZEN Graphene Solutions Ltd.

Rare earths and technology for the EV Revolution, Will Dawes, Mkango Resources Ltd.

### 2:00 pm - 4:30 pm

# **Geophysics: New proven advances and** applications in exploration geophysics

CHAIRS: Robert Hearst, Southern Geoscience Consultants & Brian Bengert, B-Field Geophysics, Toronto, Canada

Acquiring rock physical properties with the KORE system. Chris Drielsma, KORE Geosystems

Full Tensor SQUID tensor magnetic system, Joel Jansen, Anglo American plc.

Tensor and vector magnetic advances: The latest software and hardware and what it means for exploration, Wayne Stasinowsky, Consultant

Optimization of geophysical methodologies to discover magmatic intrusive Ni-Cu-PGE ore bodies in a challenging geological environment, Circé Malo-Lalonde, Canadian Royalties Inc.

Using modern downhole EM to discover high-grade, narrow vein lodes in an historical gold field,

Anne Tomlinson, Southern Geoscience Consultants

Maximizing the value of 2D hard rock seismic acquisition at Escondida porphyry copper mine, Heather Schijns, BHP

### 2:00 pm - 4:30 pm

# Moon and asteroids: The next exploration and mining frontier



CHAIRS: Joe Hinzer & Emily Nield, Watts, Griffis and McOuat Ltd., Toronto, Canada

Overview of space resources, Angel Abbud-Madrid, Colorado School of Mines Centre for Space Resources

Resources on the Moon: Enabling exploration and the new space economy, Angel Abbud-Madrid, Colorado School of Mines Centre for Space Resources

Is there ore on the moon?, Kieran Carroll, Independent Consultant

The first lunar prospecting campaign: iSpace's 2021 mission, Kyle Acierno, iSpace Inc.

Canadian minerals and metals plan: Developing a Canadian policy for space resources, Photinie Koutsavlis, Natural Resources Canada

Proposed lunar reserve and resource reporting standards, Carlos Espejel, iSpace Inc.

### 2:00 pm - 4:30 pm

# New exploration technologies



CHAIRS: Antoine Caté, SRK Consulting (Canada) Inc. & Reno Pressacco, RPA, Toronto, Canada

Automated indicator mineral identification: A new paradigm in drift exploration, Réjean Girard, IOS Services Geoscientifiques

Characterization of ore material using synchrotron technology, Glen Kuntz, Nordmin Group of Companies

Coil tubing drilling in exploration, Andy Wurst, Barrick Gold Corporation

A case study of core hyperspectral data at the AntaKori project, Kevin Heather, Regulus Resources Inc.

Utilizing stable isotopes to find gold mining camps and locate the deposits within them, Edmond van Hees, Ontario Geological Survey

Not all AI is machine learning: Getting the most from a drilling budget, Jason Dunning, Adventus Mining Corporation

## **WEDNESDAY, MARCH 4**

9:00 am - 11:30 am

# Managing and exploring big data through artificial intelligence and machine learning

CHAIRS: Eric Grunsky, University of Waterloo, Waterloo & Natalie Caciagli, Barrick Gold Corporation, Toronto, Canada

The role of semantics in big data and AI in the minerals industry, Clinton Smyth, Minerva Intelligence Inc.

**Lithology logging using deep learning**, Sebastian Goodfellow, **KORE** Geosystems

Machine learning to support geological modeling, Natalie Caciagli, Barrick Gold Corporation

Machine learning and deep learning in predictive geometallurgical modeling, Julian Ortiz, Queen's University

The uses and limitations of AI/ML applied to spectral geology, Xiaodong Zhou, Consultant

Statistical machine learning for target generation in mineral discovery, Colin Barnett & Peter Williams, BW Mining

#### 9:00 am - 11:30 am

## Metallurgical coal and iron ore

CHAIRS: Jean des Rivières, BHP, Santiago, Chile & Jerry Gauntt, Golders Associates, Lakewood, USA

Commercially significant characteristics of metallurgical coal and their implications for end-use, Belinda Sunner, BHP

Macro economic review of the iron ore market, Lynn Lupori, CRU International Ltd.

Technical collaboration supporting value generation and risk reduction at Teck coal, Jelena Puzic, Teck Resources Limited

The role of technology for resources: Optimization, extraction and stewardship, Kerry Turnock, BHP

Tailings developments related to recent iron ore dam failures, Paul Deering, Stantec

#### 9:00 am - 11:30 am

### **New discoveries and developments**

CHAIRS: Charles Beaudry, Orefinders Resources Inc. & Bill Mercer, Avalon Advanced Materials Inc., Toronto, Canada

Fenelon gold: Discovery and development along the Sunday Lake deformation zone, Northern Abitibi's emerging gold belt, Attila Péntek, Wallbridge Mining Company

Madaouela uranium project: Delivering a world class project, Daniel Major, GoviEx Uranium Inc.

Touquoy gold mine, Drew Pelley, Atlantic Gold Corporation

Curipamba: A new VMS district in Ecuador, Christian Kargl-Simard, Adventus Mining Corporation

#### 9:00 am - 11:30 am

# Supply and services market potential



CHAIRS: Mark Ferguson, S&P Global Market Intelligence, Halifax & Spencer Ramshaw, RSR Freelance, Guelph, Canada

The relationship between exploration, new mines and equipment sales: Exploration lead times, Chris Hinde, Pick and Pen Ltd.

Relationship between exploration, new mines and equipment sales: A 5-year outlook for new surface mines and equipment, Peter Gilewicz, The Parker Bay Company

Unlocking mining productivity: Lessons from the industry for suppliers and service providers, Gregory Kudar, McKinsey & Company

Global trends in renewables, energy storage, and their interactive effects with mining electrification, Chih-Ting Lo, EELO Solutions



Sponsored by



# **Services Onsite**

### AMBASSADOR PROGRAM

Sponsored by



Look for Ambassadors dressed in gold t-shirts and caps. They will help get you where you need to go and answer your questions.

### COMPLIMENTARY MASSAGE STATION

North Building, Level 300

Sponsored by

#### MICON INTERNATIONAL LIMITED

Relax, refresh and rejuvenate! Receive a 15-minute massage given in a specially-designed chair that offers ultimate comfort.

### **FREE HEADSHOT**

South Building, Level 800

Sponsored by



Need an updated headshot? Take advantage of this service, right on the Trade Show floor, beside the Food Pavilion. Your professional photo will be emailed to you in real time. Perfect for websites, social media, business cards and more.

### **FREE WI-FI**

Sponsored by



PDAC Wi-Fi service is available throughout the MTCC (limited access in the exhibit halls).

### LOUNGES

## **Recharge Hub**

**♀** South Building, Level 700

Sponsored by



Want to relax and recharge? Visit the Recharge Hub equipped with charging tables to charge your mobile device. A great location to unwind or meet with colleagues and peers.

### **VIP Lounge**

South Building, Level 600

Sponsored by



Only VIP All Access Pass holders have access to this private and exclusive lounge. While in the lounge, take advantage of:

- Daily continental breakfast and light refreshments
- · Administrative support, including scanning and photocopying
- Five free semi-private meeting rooms for up to 10 people Reservations required (non-VIP attendees permitted in the meeting rooms)

### **NURSES STATION**

**♀** North Building, Level 200 outside Room 203D and South Building, Level 800

Staffed by Registered Nurses who are capable of responding to a variety of emergency situations, and can also provide overthe-counter and prescribed medications to attendees. Stations are stocked with AED defibrillators and may also be used as a place to breast feed.

### **PLACES TO EAT**

### **Rio Tinto Café**

South Building, Level 800

Sponsored by



### **Food Pavilion**

South Building, Level 800

Sponsored by



## 700 Café & Lounge

South Building, Level 700

Sponsored by



FREEPORT-McMoRan

# **North Eatery**

North Building, Level 300

# **Specialty Coffee Shop**

♦ North Building, Level 300

### SHOE SHINE STATION

South Building, Level 800

Sponsored by



Enjoy a complimentary shoe shine in between your business meetings.

### SHUTTLE SERVICE

**♀** South Building, Level 500

Take advantage of the PDAC free shuttle service.

#### Participating hotels:

- Chelsea Hotel, Toronto (Gerrard St. entrance)
- · Courtyard by Marriott (on Wood St.)
- DoubleTree by Hilton (Chestnut St.)
- Fairmont Royal York (Front St. entrance)
- Hilton Toronto (guests walk to the Sheraton Centre))
- Hyatt Regency Toronto (Widmer St. entrance)
- The Omni King Edward Hotel (guests walk to One King West)
- One King West Hotel (Melinda St.)
- · Sheraton Centre (on York St.)
- Westin Harbour Castle (Queen's Quay)

### **SME BOOKSTORE**

South Building, Level 800



Discount prices for PDAC attendees!

The Society for Mining, Metallurgy and Exploration (SME) is back with their bookstore. Take advantage of show pricing from the most prestigious book publisher in the industry. Several new books will be showcased. Come early! Supplies are limited.

### TERRACE MEETING PLACE

South Building, Level 400

Sponsored by



Assurance | Accounting | Tax | Advisory

Looking for free meeting space? These semi-private meeting rooms are available for one-hour bookings per day. On-line bookings will be available in early January.

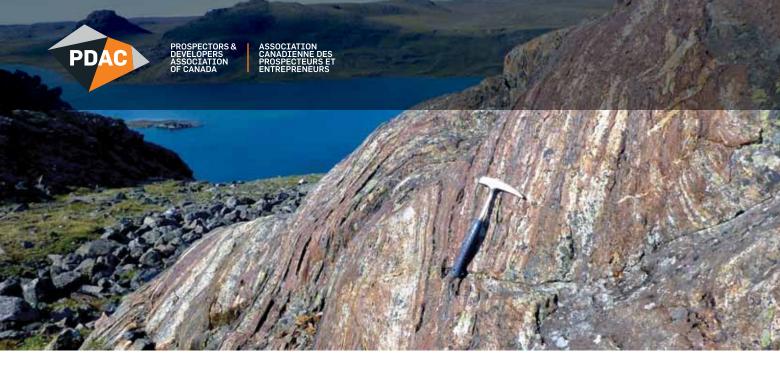
### WATER STATIONS

South Building, Level 800, North Building, Level 300

Sponsored by



Fill up your water bottle or drink from the fountain at one of the three water stations.



# **PDAC MEMBERSHIP**

# Join our Community – become a member of the leading mineral industry association and help strengthen our collective voice!

Your membership contributes to the PDAC's efforts to support a competitive exploration and development industry that operates responsibly in Canada and around the world. With a membership of over 6,500 individual and 1,000 corporate members, PDAC undertakes advocacy, develops programs and organizes the world's largest annual mineral convention.

Explore the membership opportunities at **pdac.ca/members** or contact **info@pdac.ca** for more information.

# **ARE YOU A CORE MEMBER?**

Renew by December 31 and save!

The **Core Membership Program** honours those members who make a long-term commitment to PDAC. Annual fees for Core members are \$90.48 compared to \$166.67 for regular members. Core members qualify for many benefits, including substantial discounts on PDAC Convention registration fees and Short Courses. This loyalty program requires continuous, annual membership with payments made each year between October 1 and December 31. Payments made after December 31 will be processed as Regulars. Regular members are eligible to become a Core member after one year of membership.

Prospectors & Developers Association of Canada

800-170 University Ave Toronto, ON M5H 3B3 Canada