

Canadian Mineral Analysts/Analystes canadiens des minéraux

Communicate analytical technologies in the Canadian mining industry
Communiquer les technologies analytiques dans l'industrie minière Canadienne

www.canadianmineralanalysts.com

NEWSLETTER

August 2021

Message from the Managing Secretary

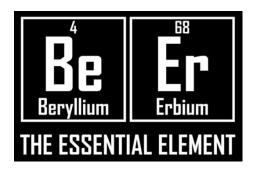
It's been another challenging year due to the COVID-19 pandemic and the Delta variant. The Canadian Mineral Analysts (CMA) hopes that everyone has stayed safe and healthy, and that the remainder of 2021 will be prosperous for everyone.

The CMA and SCP Science made a regrettable but necessary decision to cancel the 53rd Annual CMA Conference and Exhibition scheduled for October 2021 in Pointe Claire (Montréal), Québec. This is the second year running that the Conference has been cancelled. That will make everyone that more anxious to attend the 54th Annual CMA Conference in the fall of 2022!

The CMA wishes to thank individuals who have taken out a 2020–2021 CMA membership, the eleven 2020–2021 corporate members and the one 2021–2022 corporate members for their support. The CMA is your organization, and your support is important to the financial viability of the CMA. This is particularly true at this time when no revenue has been generated because the CMA Conferences in 2020 and 2021 had to be cancelled. The new membership year starts September 1, 2021 and runs to August 31, 2022. Information on obtaining or renewing individual and corporate memberships can be found in the back pages of this Newsletter.

Earlier this year, Sean Murry, CMA Treasurer, retired from VWR / Anachemia (see Sean's retirement notice on page 4). Sean will stay on as the CMA Treasurer.

Enjoy this edition of the CMA Newsletter. Feel free to distribute the Newsletter. Everyone is encouraged to submit contributions for the next Newsletter scheduled for December 2021.



Announcement 53rd Annual Canadian Mineral Analysts (CMA) Conference and Exhibition

October 17 - 21, 2021 Holiday Inn & Suites, Pointe Claire (Montréal), Québec

CANCELLED DUE TO COVID-19 PANDEMIC

Due to the COVID-19 pandemic, the CMA and Conference host, SCP Science, have made a tough but necessary decision to cancel the 2021 CMA Conference and Exhibition, scheduled to be held in Pointe Claire (Montréal), QC, on October 17 - 21, 2021. Earlier this year it was evident that there was not a 100% degree of certainty that it would be safe, by October 2021, to hold the Conference. The Delta variant which is more virulent continues to spread, and new lockdowns and travel restrictions were being imposed. Social distancing and restrictions on the size of indoor gatherings continue to be an issue. The rollout of the vaccinations was not taking place at a pace that would see everyone vaccinated by October 2021. CMA and SCP Science wanted to be assured that there would be no restrictions that would prevent anyone from attending the Conference. The CMA and SCP Science did not want to move ahead with the planning of the Conference only to be forced to cancel at a later date.

Announcement 54th Annual Canadian Mineral Analysts (CMA) Conference and Exhibition

October 16 - 20, 2022 Holiday Inn & Suites, Pointe Claire (Montréal), Québec Hosted by SCP Science

The 2022 54th Annual CMA Conference and Exhibition is tentatively scheduled to be held in Pointe Claire (Montréal), QC, on October 16 - 20, 2022 at the Holiday Inn & Suites, 6700 Trans Canada (Route 40), 11 km from the Pierre Elliot Trudeau International Airport.

SCP Science is host for the Conference, with George Feilders being the Conference Chair. As information about accommodation, delegate registration, exhibitor booths, sponsorship, submission of technical presentations, workshops, tours and social programs is finalized, everyone will be notified that this information has been posted on the Conference website.



Manufacturers of products for Atomic Spectroscopy & Environmental Chemistry

2021 - 41st Anniversary Year

ISO 9001 Certified - ISO 17025 / 17034 Accredited

SCP Science - Host of the 54th Annual CMA Conference and Exhibition



Conference Hotel – Holiday Inn & Suites, Pointe Claire, Québec

CMA 2021 Annual General Meeting

POSTPONED

The CMA Annual General Meeting (AGM) is normally held at the annual CMA Conference and Exhibition. With the cancellation of the Annual CMA Conference and Exhibition scheduled for Montréal, QC in October 2021, the 2021 CMA AGM has been postponed until October 2022.

A summary of CMA activities and financial report for 2020–2021 will be included in the December 2021 CMA Newsletter.

People on the Move



Kristin (Kriss) Leftwich

Formerly with Proto Manufacturing Inc. (X-ray diffraction) in Windsor, ON and Taylor, MI, Kriss has joined Xenocs Inc. (small-angle X-ray scattering) in Holyoke, MA as Technical Sales Scientist.

<u>Retirement – Sean Murry</u>



Sean at the PDAC Convention in Toronto, ON in March 2020



Sean at the VWR booth at the CMA Conference in Niagara, Falls, ON in September 2019



Sean (right) with Glen Graham (left) and Derrik Harrison (centre) at the VWR booth at CMA Conference in Trail/Rossland, BC in September 2018

On May 14, 2021, Sean Murry retired from VWR / Anachemia (an Avantor company).

Sean was born in Red Deer, AB. As a kid he lived in Red Deer, Kamloops and Edmonton because his father was a dry goods manager whose job forced him to move around Western Canada. He went to high school in White Rock, BC. As a young man his first job was a bus driver in Banff, AB. In 1972, Sean was hired by Chuck Mainard at NA Scientific Chemicals (a chemicals and glassware company). Sean then worked for a number of companies when Chemonics Scientific bought NA Scientific Chemicals, Anachemia bought Chemonics and Mines Assay Supply, VWR bought Anachemia in 2011, and finally in 2017 Avantor bought VWR / Anachemia. Avantor became a public company in 2018.

When Sean retired from Avantor he held the position as Vice President, Mining Global, and was based in Richmond, BC.

In 1984, Sean married Elizabeth, a physiotherapist from Dublin, Ireland. They have five children (3 sons and 2 daughters) and four grandchildren (ages 5 months, 8 months, 3 and 5). Sean and Elizabeth live in North Vancouver, BC. Now that Sean is retired, he has much more time to devote to his hiking and cycling interests. He enjoys hiking in the 'wild' where he is forced to camp and carry all of his gear.

Sean cycles around Vancouver where he puts in about 150 kms a week. On his longer cycling trips, Sean has ridden from Vancouver to Montréal at age 17, and Vancouver to San Francisco at age 26. In 2020, he completed his cross-Canada adventure at age 64 by bicycling with his kids from Montréal to St. John's, NL. To celebrate the 50th anniversary of Sean's Montréal cycling trip, Sean and his cycling buddy Ron, along with Sean's youngest son Brian, completed the Sunshine Coast Loop on the West Coast of British Columbia. Another interest that keeps Sean busy is collecting 1/25 and 1/43 scale model cars. Sean also enjoys hooking up their 5th wheel and travelling through Western Canada and USA on two-week trips.

At every CMA Conference for the past 20–25 years, Sean was responsible for coordinating the theme for the VWR / Anachemia exhibit booth to ensure the company's booth would win the Best Exhibit Booth. Perhaps now that Sean is retired other companies will have a chance at winning the award!

Sean has been the CMA Treasurer since 2008, a position he assumed from Bill Clifford. Being the CMA Treasurer is a volunteer position, and Sean has done a great job maintaining the financial records, sending out membership cards and receipts, and writing cheques to the CMA scholarship and equipment grant recipients. Now that Sean has retired, he has indicated that he will continue as the CMA Treasurer. A big heartfelt thanks goes out to Sean for his commitment and service to the CMA.

The following story was provided by Peter Cavender, Director of Mining, Americas for VWR (part of Avantor). Peter is based in Reno, Nevada. In 2018, Sean and Peter drove the entire Route 66 from Chicago, IL to Santa Monica, CA collecting many memories and stories along the way.

As news of the Fagradalsfjall volcano eruptions in Iceland have made news in recent days, it takes me back to another volcanic event that took place in Iceland in 2010. The Eyjafjallajökull volcano erupted in mid-April of that year, resulting in over 95,000 flights being cancelled in European airspace – resulting in what at the time was the largest air-traffic shutdown since World War II.

Sean Murry and I were on a return trip from abroad having visited some customers and suppliers. We landed at London's Heathrow airport and were advised as we passed through Customs that we "might be there for a while", hearing news of the eruption. Our flight that was to take us home the next day would likely be cancelled, and indeed it was. There we were...stranded in London.

Those who have spent time with Sean, or – more accurately – walked anywhere with Sean, know that he is a very fast walker. I'm confident my legs are several inches longer than his, however I struggle to keep up with him when he's on his pace. I honestly believe on one occasion I gave myself shin splints trying to stay up with him! During this trip though, Sean was having issues with one of his knees – an issue that would ultimately be repaired via surgery after we made it home. However, on this occasion, I considered it to be a small victory on my part, as his normal breakneck speed was replaced with a minor "hobble", reducing his gait to what I would consider a quite comfortable pace.

Each day for six days, we would check with the airlines and travel agents and the news was the same each day...no available flights. So, we would get some work done in the mornings: responding to e-mails, etc., and then off we would go to experience what London had to offer. I had never been to London, though Sean had been there many times. It was like having my own personal tour guide at my disposal – sharing his knowledge of the city in way that I remember to this day.

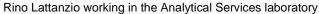
Sean also enjoys having "a pint" (or two!) at the end of each day, as do I. We found a local pub and, like clockwork, managed to find ourselves there each day at 5:00 pm. By the end of the week, I had finally mastered the art of correctly drinking a Guinness (only 4 froth lines in that glass!) and we were considered "locals" to some degree, I guess. We met and talked with some of the most interesting people I've ever encountered. I can honestly say memories were made during that week with Sean in London that will last me a lifetime.

When Sean tells the story of this trip to others, he often refers to it as, "The week Pete and I got married in London". It was short-lived, but most enjoyable. For me, this was just one of many "memory makers" I've had with Sean in my near 30 years of knowing him. Without question, there are worse places in the world to be stranded for a week than London, England. However, there's nobody better to have been with for that week than Sean Murry.

P.S.: In full disclosure, if you can pronounce the names of either volcano mentioned above, you're doing better than me!

Retirement - Rino Lattanzio







Rino Lattanzio (right) receiving his 30-year gift from Luigi Iseneria

Richard Magner, Analytical Services, Superintendent, Teck Metals Limited – Trail Operations provided the following write-up to mark Rino Lattanzio's retirement in early 2021.

"Rino graduated from the University of Lethbridge with a B.Sc. in Chemistry in 1980 and was promptly hired by Analytical Services Cominco.

In 1989, Rino was positioned to continue his studies to achieve BC Assayer Certification. He was successful and completed the training, which resulted in him gaining experience in all of Analytical Services laboratories.

In 2009, Rino became the Senior Technician for ICP-OES laboratory. His presence was immediately felt when he authored countless SOPs for inclusion into our Control Document System, as well as helped to bring online a new acid dispensing system that we continue to use to this day. He continues to ensure that his experiences are passed down to new talent at Analytical Services. Rino participated in the CMA Conferences hosted by Teck held in 2010 and 2018 by touring guests through the various laboratories.

If I could sum up Rino in one word it would be dedicated. He tends to monitor his emails on the off shift. As a matter of fact, on more than one occasion I caught him showing up for work when he wasn't even scheduled to work...dedication! Of course, but I think he honestly forgot as he was trying to slip out and go back home before anyone noticed...but I did. I guess shift work schedule is a little more complicated than I thought...not.

I would like to thank Rino for his many years of good service in all areas of Cominco & now Teck. He is an individual who fosters good relationships amongst all staff, and as a result has become a great mentor for all technicians at Analytical Services."

The CMA congratulates Rino on his retirement and wishes him many years of happiness and prosperity.

Down The CMA Memory Lane

The first Annual Conference of the Canadian Mineral Analysts (CMA) was held on October 9, 1969 in Rouyn–Noranda, Québec. The primary function of the meeting was to establish an organization of assayers, chemical analysts and analytical chemists to promote better communications among all of those engaged in analyzing minerals mined and processed in Canada, especially pertaining to instrumental analysis and the requisite instrumentation and analytical methods involved.

The Conference was held in the curling lounge of the Noranda Recreation Centre with 55 attendees, among whom were assayers, chief chemists, metallurgists, mill and smelter superintendents, researchers and educationists from 36 different gold, base metal and iron mines and smelters and associated industries. Except for one mine representative from Manitoba (Sherritt–Gordon Mines), all mines represented were from Northern Ontario and Northwestern Québec.

At an afternoon discussion, a vote was unanimous in favour of forming the CMA. John Gilles (Chairman), Jim Tweed (Vice-chairman) and Gerry Hunt (Secretary) were elected as officers of the CMA. The Committee members were made up of: Jim Chilibeck, Jim Fogarty, Wes Hyndman, Ron Klassen, Claire Cornett, Peter Lukey and Hugh McDonald.

Fifty-three years later the CMA is still in existence!



Participants at the First Annual Conference of the Canadian Mineral Analysts (CMA), Rouyn-Noranda, QC, October 9, 1969

The attendees of the First Annual CMA Conference are listed below. Perhaps you recognize the names! Mr. James Tweed, Chief Assayer, Dome Mines Limited, has a CMA scholarship named in his honour. Not all 55 attendees are captured in the photo above or the list below.

Campbell Chibougamau Mines Limited	Mr. J. Malette, Chief Assayer	
Cobalt Refinery	Mrs. D. Quirt, Laboratory Technologist Mr. D. Wilson, Metallurgist	
Copperfields Mining Corp.	Mr. R. Cooper, Assistant Assayer	
	Mr. D. MacFarlane, Chief Assayer	
Dome Mines Limited	Mr. J. Tweed, Chief Assayer	
Ecstall Mining Limited	Mr. L. C. Green, Chief Chemist	

Falconbridge Nickel Mines Limited	Mr. C. C. Cornett, Chief Chemist				
Haileybury School of Mines	Mr. J. Chilibec, Instructor				
Traileybury Scribbi of Willies	Mr. J. D. Frey, Dean				
Jones and Laughlin Mining Co. Limited	Mr. G. Goode, Metallurgist				
Kam-Kotia Mines Limited	Mr. R. Pang, Chief Assayer				
Nam-Notia Willies Elimited	Mr. L. A. Tegel, Research Metallurgist				
	Mr. J. Cahill, Chief Chemist				
Lake Dufault Mines Limited	Mr. R. Deshaies				
	Mr. A. Williams, Metallurgist				
Lamaque Mining Company Limited	Mr. T. Graham, Mill Superintendent				
Macassa Gold Mines Limited	Mr. Bill Dowey, Mill Superintendent				
Manitou Barvue Mines Limited	Mr. J. P. Jolicoeur, Mill Superintendent				
	Mr. P. Lukey, Chief Assayer				
Mattagami Lake Mines Limited	Mr. W. Hyndman, Chief Chemist				
McIntyre Porcupine Mines Limited	Mr. E. McPhail, Chief Assayer				
	Mr. R. Nice, Mill Metallurgist				
Mines Branch, Extraction Metallurgy Division	Mr. G. Hunt, Scientific Officer				
·	Mr. C. S. Stevens, Industry Liaison Officer				
Mines de Poirier Inc.	Mr. G. Ladouceur, Assistant Mill Superintendent				
	Mr. A. Poirier, Chief Assayer				
Molybdenite Corp. of Canada Limited	Mr. L. Roy, Mill Superintendent				
Noranda Mines Limited	Mr. J. Gillies, General Supervisor of Laboratories				
N	Mr. E. Goodwin, Chemist				
Noranda Mines Limited – Horne Division	Mr. D. J. Semple, Chief Chemist				
Name de Missa Limited - Osca Division	Mr. D. Perkins, Chemist				
Noranda Mines Limited – Geco Division	Mr. H. H. McDonald, Chief Chemist				
Normetal Mines Limited	Mr. L. Roberts, Chief Assayer				
Opamiaka Cappar Minas (Quábas) Ltd	Mr. G. E. Horseby, Chief Assayer				
Opemiska Copper Mines (Québec) Ltd. Orchan Mines Limited	Mr. G. E. Hornsby, Chief Assayer				
	Mr. A. Peterson, Chief Assayer				
Pamour Porcupine Mines Limited	Mr. S. Belanger, Chief Assayer				
Patino Mining Corporation	Mr. I. Meaney, Chief Assayer				
PerkinElmer Corporation	Mr. G.E. Peterson, Specialist				
Philips Electronic Equipment	Mr. C. Whitelaw, Application Engineer				
Quemont Mines Limited	Mr. L. R. Gatehouse, Chief Chemist				
	Mr. C. I. Lawton, Mill Superintendent Mr. D. Paille, Mill Technician				
Sherman Mines					
Sherritt Gordon Mines Limited	Mr. D. Gordon Campbell, Plant Metallurgist				
	Mr. S. Nunn, Mill Superintendent				
Sigma Mines (Québec) Limited	Mr. A. Perron, Chief Assayer				
Upper Canada Mines Limited	Mr. E. J. Marcotte, Mill Superintendent				
	Mr. H. Newington, Chief Assayer				
Wright-Hargreaves Mines Limited – Wasanac	Mr. B. B. Fraser, Chief Assayer Mr. H. W. Hughes, Mill Superintendent				
	ivii. 11. vv. riugiies, iviiii supeririteriuerit				

OREAS Information Videos

OREAS Certified Reference Materials has produced two short, informative videos on homogeneity and choosing a certified reference material supplier. The videos are hosted by Lynda Bloom, QA/QC Specialist, Analytical Solutions Ltd.

The first video (3 minutes long) discusses why homogeneity is important and why some manufacturers find it difficult to achieve good homogeneity in gold standards (certified reference materials).

OREAS - Why homogeneity is important - YouTube

The second video (3 ½ minutes long) looks at five key things to consider when choosing a certified reference material (CRM) supplier that will maximise your chances of a successful quality control program.

OREAS - Choosing a CRM supplier - YouTube

To open each video, press and hold CTRL, place your cursor on the YouTube link, and left click your mouse.

CALA News & Updates

CALA Inc's May 2021 Connections newsletter with the latest news and updates can be accessed at the following link:

May News & Updates from CALA (mailchi.mp)

To open the link, press and hold CTRL, place your cursor on the link, and left click your mouse.

CMA Scholarship Program

The CMA provides scholarships to students who are enrolled in fire assaying and chemical technology programs at Canadian colleges. The awards are not only made on the basis of the student's academic performance. Students are also evaluated by the college on their involvement, commitment and overall motivation towards pursuing a career in the Canadian mining laboratory industry.

In 2021, the CMA awarded four \$1,000 scholarships: two to students at the British Columba Institute of Technology (BCIT) in Burnaby, BC, one to a student at Cambrian College in Sudbury, ON and one to a student at CEGEP in Sept-Îles, QC. Information about the students who received their awards will appear in the December 2021 CMA Newsletter.

Some CMA scholarships have been named in honour of CMA members who were long time members and staunch supporters of the CMA and its activities. The individuals so honoured are Mr. James Tweed, Dr. Ian Devereux, Mr. Bill Clifford, and Dr. Eric Hoffman.

The James Tweed BCIT Scholarship

This scholarship is presented annually at the British Columbia Institute of Technology (BCIT) in Burnaby, BC. James Tweed, a founding member of the CMA and a past managing secretary had a lifetime



commitment to the Canadian mining industry having worked 25 years with Dome Mines,10 years as a lab manager at Dome's Sigma Mine in Val D'or, Québec, and 15 years as a lab supervisor at the Dome Mine property in Timmins Ontario. James passed away August 23, 1992. In 1992 at the Val d'Or, Québec conference it was decided to name a BCIT scholarship in his honour.

His feelings for the CMA are best reflected in these words from his last managing secretary's report in 1989: "I like to think that our success as an organization is due to many factors such as good fellowship, a chance to discuss problems with your peers, an opportunity to see and discuss the latest technology with a variety of exhibitors."

"I also think it is important for our membership to attend our annual meetings as it gives them a break from the daily grind, and I am sure they all return to their respective laboratories with a sense of renewal".

The Ian Devereux Cambrian College Scholarship

Created in 2009 at the Bathurst, New Brunswick conference, it is presented annually to a student enrolled at the British Columbia Institute of Technology. Before his retirement, Dr. Ian Devereux was the Managing Director and owner of Rocklabs, a company that manufactured sample preparation equipment for the mining industry. Rocklabs was recently purchased by Scott Technologies Inc.

He had a MSc (Honours) degree in Chemistry and a PhD in Geochemistry. He was a Fellow of the New Zealand Institute of Chemistry and Australasian Institute of Mining and Metallurgy. His professional achievements included receiving the ANZAC Fellow award from the Australian Government and the 1996 Mineral Industry Operating technique award from the AusIMM. Dr.



Devereux was a CMA member from 1967 to 2020, and was presented with a Lifetime Membership in 2008 in recognition of his contributions to the organization. As an international traveler, Dr. Devereux promoted the CMA worldwide, and was a long-time advocate of CMA. Ian passed away April 25, 2020.

The Bill Clifford CÉGEP Scholarship

Created in 2015 and is awarded annually by the Canadian Mineral Analysts (CMA) to a student enrolled in the BCIT Assayer Certification Training Program. Assayer Certification in BC started in 1895.

Bill worked in the mining industry for over 50 years. He was well known and respected for his knowledge of the methods, products, the business, his integrity and professionalism. He was a calm caring individual and always a gentleman.

After graduating from high school, Bill started working for Swastika Laboratories in Swastika, Ontario, which is part of the extended "gold camp" of Kirkland Lake, Ontario. The main service of the lab was assaying for gold content, working with exploration companies and established mines.

Bill started in the sample preparation room of the lab while learning the trade from the co-owners: Mr. William Gerrie and Dr. Douglas Ker-Lawson. Under their mentorship, Bill learned everything from sample preparation to all aspects of wet chemical analysis and fire assaying.

Bill moved on to X-Ray Assay Laboratories Ltd., a commercial laboratory in Toronto, where he worked in the Analytical Lab preparing samples and analyzing them using X-ray fluorescence and atomic absorption methods.



He then moved on to work as the Chief Assayer at Dome Mines, South Porcupine, Ontario, for 11 years. There he was responsible for all aspect of the department: personnel, budget, capital expenditures, purchasing, as well as ensuring the quality of analysis of 300+ samples a day – all with a keen focus on new method development.

Bill joined Mines Assay Supplies in 1986 as the General Manager: his knowledge of the business and products dovetailed nicely into sales. Mines Assay was purchased by Anachemia Science in 1993. Bill managed the Kirkland Lake Branch for 11 years before moving to a Director of Sales position at Anachemia in the Vancouver Office where he worked until he retired.

Bill became a member of the Canadian Mineral Analysis in 1976 and he remained active until his passing in May 2015. He was Secretary and Treasurer for many years. When mining had slow years, and there was some doubt that the annual conference would happen, Bill took up the cause and was known at the annual event to be always on the lookout for someone who would commit to "Host" the next conference. Bill was instrumental in ensuring the CMA continued each year. He was also instrumental in assisting Jack Simmons to set up the Society of Mineral Analysts in the US (an organization that is now dormant).

Bill was very passionate about, and committed to, the continuing education of people who were interested in entering the mining industry. This was evidenced through not only his active membership in the CMA and SMA, but also through the mentorship and support he offered others.

Over the years, Bill never stopped growing or learning. He took a two-year course in General Chemistry, a course to study conversational French, safety courses, photography, and golf lessons, to name a few. He volunteered for the United Way, the CNIB, the Canadian Red Cross, the United Church, and a Christmas Food Fund. In addition, he coached soccer, and was an avid Toronto Maple Leafs fan. He also enjoyed his annual family fishing trips, and treasured his family.

The Eric Hoffman BCIT Scholarship

Created in 2016, the scholarship is presented annually by the Canadian Mineral Analysts (CMA) to a student enrolled at the British Columbia Institute of Technology. Eric Hoffman was an economic geologist with over 30 years of experience in minerals exploration, analysis, and management. He passed away on July 10, 2015.

He received his Bachelor of Science (Hons.) in Geology in 1974, and his Masters of Science in Geology

in 1975, both from McGill University. In 1974, Eric was awarded the Logan Gold Medal for Highest Standing and graduated with First Class Honours with Great Distinction. He received his Ph.D. in Geology from the University of Toronto in 1978.

The Canadian Innovation Leader Award was presented to Eric in 2009 by the Government of Canada. In 2013, Eric received the Association of Applied Geochemists' Gold Medal for outstanding scientific achievement in applied geochemistry. In 1987, Eric established Activation Laboratories Ltd. (Actlabs) Group of Companies with a focus on commercializing innovative technologies with the highest quality standards for the minerals, metallurgy, petroleum, life sciences, environmental, forensics, material testing and agricultural industries.



He achieved global success by growing Actlabs into 27 laboratories in 12 countries. In 2014, Actlabs opened a new 200,000 square foot global headquarters in Ancaster, Ontario. Eric was a long-time member of the Canadian Mineral Analysts (CMA), a regular attendee at the annual CMA Conference, and an active participant at the annual CMA business meetings.

Lab Humour



You enter the laboratory and see an experiment. How will you know which class it is?

If it's green and wiggles, it's biology. If it stinks, it's chemistry. If it doesn't work, it's physics.

What did one lab rat say to the other?

I've got my scientist so well trained that every time I push the buzzer, he brings me a snack.

A pessimist sees a glass of water as half empty. An optimist sees a glass of water as half full. A chemist sees a glass of water as full: half water and half air.

2020–2021 CMA Corporate Members

Listed below are the eleven CMA Corporate Members for 2020–2021. The CMA thanks each of them for their support.

- Analytik Jena USA LLC
- Bruker AXS LLC
- COVIA Canada Ltd.
- Independent Laboratories Supplies Americas Ltd.
- Laval Lab Inc.
- LGC ARMI
- OREAS North America Inc.
- Prolite Systems Inc.
- Scott Technologies Inc.
- SGS Canada Inc.
- Teck Metals Ltd. Analytical Services

Your support of CMA Corporate Members is important. Be sure to thank each of them for their support of the CMA. Each of them has provided an information sheet, included on the following pages, which outlines their products and services.

Information on how your organization can become a 2021–2022 CMA Corporate Member can be found on the last page of this Newsletter.

analytikjena

An Endress+Hauser Company

Analytik Jena US LLC

234-N - 100 Cummings Center Beverly, MA 01915-6235 U.S.A

Tel. (781) 376-9899

Contact: Siqi Sun, Marketing Specialist E-mail: siqi.sun@us.analytik-jena.com

Website: www.analytik-jena.us



Tradition with innovative power

Analytik Jena takes pride in a long history and tradition of developing high-end analytical instrumentation, which dates back to the inventions made by Ernst Abbe and Carl Zeiss in Jena, Germany over 150 years ago.

Within the last 25 years Analytik Jena has become one of the most innovative manufacturers of analytical measuring technology that serves the demands of routine laboratories as well as of sophisticated niche applications worldwide.

Industries and fields of application:

- Oil & Gas
- Geology, Mining & Metals
- Chemicals & Materials
- Environment
- Food & Agriculture
- Pharma & Life Sciences
- Power & Energy

Elemental Analysis, Sum Parameter Analysis and Molecular Spectroscopy



novAA Series Classical line source AAS with Dual Optics



contrAA Series
High-Resolution Continuum Source AAS with
simultaneous background correction for fast
sequential and simultaneous multi-element



PlasmaQuant MS Series Bench-top ICP-MS with patented ion optics for unmatched sensitivity and robust plasma



ZEEnit Series

Line source AAS with Deuterium and Zeeman background correction with third generation magnetic field control.



PlasmaQuant PQ 9100 Series

High-Resolution Array ICP-DES with Dual View PLUS plasma observation for automated attenuation of axial and radial plasma views.



SPECORD Series

Split-Beam-Technology and high performance diode-array systems for simultaneous high-speed measurement.



multi N/C Series

Parameters such as TOC, NPOC, POC, TC, TIC and TN, can be measured quickly, easily and without any conversion in aqueous samples.



multi X AOX/TOX Analyzer

The innovative double furnace technology with tilting furnace combines the advantages of both the vertical and horizontal furnace.



multi EA Analyzers

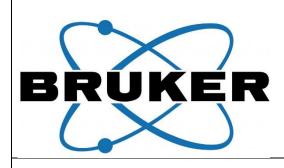
Micro- and Macro-Elemental Analysis. C/N/S/CI testing plus TOC, AOX/TOX and EOX.

Contact Information

Main Office

100 Cummings Center, Suite 234-N Beverly, MA 01915 · USA Phone +1 781 376 9899 Fax +1 781 376 9897 Applications Lab

14525 Kirby Dr. Pearland, TX 77047 · USA application@us.analytik-jena.com Phone +1 713 300 6283 Visit our website: www.analytik-jena.us



Bruker AXS LLC

5465 East Cheryl Parkway Madison, WI 53711 U.S.A.

Tel. (800) 234-9729

Contact: Siddharth Pharasi

Senior Sales Representative -Canada Sales - XRD / XRF / XRM

E-mail: siddharth.pharasi@bruker.com

Website: www.bruker.com

BRUKER AXS

5465 East Cheryl Pkwy, WI, USA Main Contact: Sid Pharasi siddharth.pharasi@bruker.com 416-970-9125



XRay Fluoresence (XRF) and Xray Diffraction (XRD) Instrumentation





S6 JAGUAR



S8 TIGER Sequential WDXRF



S8 LION Simultaneous WDXRF



- · Ideal Process and Quality control instrumentation for Geochem, Minerals and
- QUANT packages for Iron Ore, Nickel Ore, Copper Ore, Aluminum Processing and REE analyses
- Multiple modes of analyses air, vacuum, Helium
- Ability to handle various sample types loose powders, pellets, fused beads, liquids
- Turnkey commissioning with Canadian based service engineers and Application specialists
- · Dedicated 1-800 telephone and webex support
- · North American inventory for spare parts and
- 24/7 Remote support available
- · Onsite and classroom based maintenance training courses



D2 PHASER Benchtop XRD

Bruker X-ray instruments are designed with high flexibility for future requirements. They can be upgraded to automatic operation. All Bruker X-ray solutions allow seamless and flexible integration into laboratory and total automation solutions.

Innovation with Integrity



Covia Canada Ltd. 260 Unimin Road Havelock, ON K0L 1Z0 Canada Tel. (705) 877-2212 Ext. 280

Contact: Duncan Shaw, Quality Control and

Environmental Supervisor

E-mail: duncan.shaw@coviacorp.com

Website: www.coviacorp.com

Covia Canada Ltd. is a subsidiary of Covia Holdings LLC. based in Independence Ohio. Covia was formed in 2018 through the merger of Unimin and Fairmount Sandtrol. Covia is the North American leader in the supply of industrial minerals to a wide market with customers in foundry, building products, energy, ceramics, coatings and polymers, water filtration, glass, and sports and recreation markets. The origins of Covia date back nearly 100 years. Covia's values of safety first, be different, deliver on promise, and act responsibly are the characters and supporting behaviours at the core of how Covia does business. They help define our Clearly Covia Culture, setting the tone for our day-to-day actions and how we interact with our customers, communities, stakeholders and one another. These values define who we are as a company.

About the Nepheline Syenite Operation

The Nepheline Syenite Operation (NSO) consists of two facilities located approximately 2 hours northeast of Toronto. The Nephton plant and the Blue Mountain plant. Canadian nepheline has been mined in the Havelock area for generations. Nepheline was first discovered in the 1890's. Active mining operations have been in operation, continuously, at the Nephton site since 1935 and the Blue Mountain site since 1955. Currently the Blue Mountain plant is undergoing a multi million-dollar expansion which will more than double the production capacity of the facility.

Nepheline Syenite is a unique mineral with only a handful of mine sites worldwide. Nepheline Syenite is an inert igneous rock formed out of molten magma. Similar to granite, nepheline syenite is comprised of three types of minerals: the microline form of felspar, the albite form of feldspar and nepheline. Canadian nepheline is unique in that the mafic minerals are easily separated through a simple mechanical process resulting in a very low iron content. Canadian Nepheline is shipped worldwide and is used in the production of ceramics, glass, paint and hundreds of other products. Canadian Nepheline is processed through a dry system of crushers, screens and magnetic separators to produce various sized sand products. The sand is shipped as a finished product to a number of our customers. A portion of the sand produced is used to feed a number of ball mils, which produce our range of fine grind products.

The top priority at the NSO is the health and safety of all employees. Covia is committed to building a safety culture that helps to ensure everyone maintains the same high level of safety awareness at work and at home. With Safety First being the first key value of Clearly Covia. The main components of the Safety First value being safety starts with me, live the lifesaving rules, and bring safety home. Teaching every employee the SLAM (Stop, Look, Analyze, Manage) tool and how to utilize effectively with each at risk task and work and at home has led to a low injury rate and positive proactive safety culture.

The NSO is dedicated to being an active member in the surrounding communities. The NSO participates in a number of local fundraising initiatives from the local schools to numerous sporting organizations to cultural and educational based initiatives. The site also has a number of employees that participate in our volunteer program, which is unique within our organization. Covia will make a financial contribution to that organization for every hour that the employee contributes to that organization in volunteer time.

Covia is a proud champion of the environment. Our location is a gold certified member with the Wildlife Habitat Council. The NSO runs a turtle monitoring program where we monitor the access and haulage roads for the month of June observing and documenting turtle movement and nests. The focus is on blandings, spotted, painted and snapping turtles. The site is permitted, by the Ministry of the Environment to collect, incubate, and hatch the turtle eggs and then release the baby turtles back to the area where that nest was first collected. In the last three years we have released approximately 500 baby turtles back into the wild.



Independent Laboratory Supplies Americas Ltd.

12 – 868 Falconbridge Road Sudbury, ON P3A 5K7 Canada

Tel. (705) 524-8802 Contact: Nawaf Saleh Sales Executive

E-mail: nawaf.a@indlabsupplies.com Website: www.indlabsupplies.com

INDEPENDENT LABORATORY SUPPLIES

"Your Independent Procurement Partner"

INDEPENDENT LABORATORY SUPPLIES

(ILS) is an independently owned and operated company focusing solely on the supply and service of all your Mining Assay Laboratory requirements.

With over 35 years' experience in the mining laboratory supply business, **ILS** is committed to an "alternative" procurement solution.

Through its global logistics network, **ILS** is able to provide its products to anywhere in the world with a focus on quality, service, knowledge and trust.

ILS also offers laboratory consultancy chemist services through our Technical Services Division. Our experienced technical team works with companies requiring mine site and exploration laboratories and can offer a broad range of services.

Our head office is in Perth, Australia, and we are pleased to announce the opening of Independent Laboratory Supplies Americas Ltd (ILS Americas), which provides our existing services to mining companies within North, Central and South America. Our new office and warehouse is in Sudbury, Ontario.

ILS Americas is now starting to provide and distribute laboratory equipment, reagents and day-to-day consumables as well as laboratory technical services, such as audits, technical evaluations and onsite laboratory design and construction. ILS Americas will stock items in our warehouse on request. If we don't have it, will get it for you!







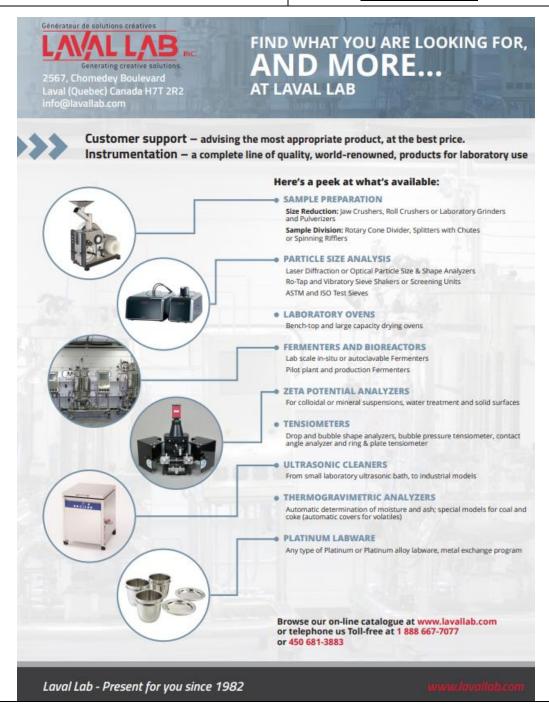
Laval Lab Inc. 2567 Chomeday Boulevard Laval, QC H7T 2R2 Canada Tel. (450) 681-3883

Contact: André Labrecque

Chief Executive Officer

E-mail: alabrecque@lavallab.com

Website: www.lavallab.com





LGC ARMI 276 Abby Road Manchester, NH 03103 U.S.A.

Tel. (603) 206-0735 Contact: David Coler

Vice President Commercial— Industrial Business Sector E-mail: david.coler@lgcstandards.com

Website: www.lgcstandards.com



CRMs for metal alloys, industrial & geological applications.

- · Elemental Analysis
- Metal Alloys
- · 1400 compositions
- · Base alloys Al, Ni, Co, Pb, Sn, Fe, Zn, Cu, Ti
- · Battery alloys
- · Galvanizing alloys
- · Pb/Sn solders
- · Additive Manufacturing
- Cement
- Mining
- Performance Materials
- · Profi ciency Testing
- · Custom RMs/CRMs

www.armi.com

LGC Quality | ISO 17043 | ISO 17034 | ISO/IEC 17025 | ISO 9001





OREAS North America Inc. 174 Douglas Street, Warehouse #2 Sudbury, ON P3E 1G1 Canada Tel. (705) 479-1184 Ext. 2

Contact: Chantal Jolette

Manager (North America)

E-mail: chantal.jolette@oreas.ca

Website: www.oreas.ca





OREAS has been raising standards since 1988, helping thousands of scientists increase their accuracy with uncompromised control in geological data. We offer the world's largest supply of certified reference materials and 48-hour shipping across our entire range. Only the highest quality CRMs provide reliable assay data, therefore every OREAS® CRM comes with our quality assurance guarantee to safeguard the success of your quality control program.

Gold CRMs

We test, quantify and confirm the absolute level of homogeneity using Instrumental Neutron Activation Analysis (INAA) on a reduced sub-sample of just 85mg for every gold CRM we prepare. All OREAS® gold CRMs and Custom gold CRMs come with a guarantee of homogeneity irrespective of source materials, so you will never see control failures due to poor homogeneity.

SuperCRMs®

Suitable for a range of applications, OREAS SuperCRMs® allow you to monitor multiple analytes using a single CRM. Each SuperCRM® is analysed for over 40 elements using several analytical methods. They provide flexibility in your QC monitoring and are ideal for alteration mapping, pathfinder elements and other ICP applications.

Certificates & DataPacks

For easier assay monitoring, and data handling, every OREAS® CRM comes with a Certificate and DataPack including:

- Tabulations of all laboratory results
- · Quantified homogeneity (absolute & relative)
- Gold homogeneity by INAA
- · Simple data transfer (Excel)
- Graphical analysis
- Performance gates (SD's)
- 95% Confidence intervals
- 95% Tolerance intervals

LOCALLY STOCKED IN CANADA | 48-HOUR SHIPPING | oreas.ca | info@oreas.ca | sales@oreas.ca



Prolite Systems Inc. 20127 113B Avenue Maple Ridge, BC V2X 0Z1 Canada

Tel. (604) 460-8250

Contact: Brad Warning, President E-mail: brad@prolitepiping.com Website: www.prolitepiping.com

Industrial Plastics Manufacturing, Fabrication & Distribution



Prolite Systems Inc. is a Canadian based international thermoplastic manufacturer, custom fabricator and distributor specializing in dual laminates and many other types of plastic industrial and municipal corrosion resistant process equipment.

Our custom fabrication facilities affords us to be the leader in design of thermoplastics, dual laminates, Fume Hoods, Acid Scrubbers, piping and tanks.

Our services include everything from design and manufacturing, to transport and installation.







PVC Laboratory Fume hoods for perchloric and multiple assay acids
PVC and PP centrifugal fans for flows of 500 CFM to 7,000 CFM
PVC and PP horizontal low micron inertial type scrubbers for flows of 500- 45,000 CFM
FRP blowers available up to 45,000 CFM
PVC and CPVC ducting systems

Contact

TEL: 604 460 8250 FAX: 604 460 8254 EMAIL: Josy@prolitepiping.com ADDRESS: 20127 - 1138 Ave Maple Ridge, BC, Canada V2X 0Z1



Scott Technologies Inc. 973 West 3rd Street North Vancouver, BC V7P 1E4 Tel. (647) 389-9254

Contact: Glen Graham

E-mail: ggraham@scottautomation.com Website: www.scottautomation.com

Products/Solutions

SCOTT specialises in the design and manufacture of automated production, robotics and process machinery. Experts in automation & robotic solutions globally that improve productivity, reliability, yield, and safety for manufacturers and processors in industries. Widely recognised, as a world-class builder of advanced automation systems, particularly for the appliance, meat processing, mining, materials handling and industrial automation industries globally.



RoboPrep Elite



Rocklabs ABM3000 Batch Mill



Rocklabs Standalone RSD



Rocklabs BIG BOYD Crusher



Gravity Gold Concentrator



Spare Parts and Consumables



Drying Oven



Continuous Ring Mill



Rocklabs AP300



SGS

SGS Canada Inc.

Suite E - 3260 Production Way Burnaby, BC V5A 4W4 Canada

Tel. (604) 638-2349

Contact: Andrew Pickering

Director, Geochemistry,

North America

E-mail: andrew.pickering@sgs.com

Website: www.sgs.com

SGS NATURAL RESOURCES METALS & MINING EXPERTISE

Delivering Quality Expertise Across TheMining Life Cycle Throughout North America

Across North America, our integrated approach delivers testing and expertise through out the entire mining life cycle leading you to project success. Our technical expertise for processing remains unmatched around the world. Our services encompass the skills of qualified geologists, geostaticians, analytical chemists, mineralogists, metallurgists, process engineers and mining engineers are brought together to provide accurate and timely mineral and process evaluation and consulting services.

Backed by a global network, our integrated approach provides the mining industry with:

GEOLOGICAL SERVICES

Our geological services bring the disciplines of geology, geostatistics, and mining engineering together to provide customers with accurate and timely mineral project evaluation solutions. Our machine learning technologies are focussed on finding new ore bodies, evaluate risk, and determining potential for mineral resource expansion, rather than just optimizing operations.

GEOCHEMISTRY

Our network of commercial laboratories, sample preparation facilities and mine-site and mobile labs link together creating a market leading network of geochemistry labs providing an unparalleled suite of target elements. Our geochemical team across Canada provides you the quality, consistency and ethical compliance needed for geochemical analysis.

METALLURGY & MINERALOGY

For 80 years, we have been providing bankable metallurgical expertise across Canada. With locations in Lakefield, Ontario, Vancouver, British Columbia and Quebec City, Quebec, our bankable expertise has been providing mining companies with a comprehensive understanding of their deposit and ore



variability while optimizing flowsheet design for processing.

PROCESS DESIGN & ENGINEERING

We offer a range of integrated services for the global mining, bulk materials handling, and mineral beneficiation and processing sectors. Our state-of-the-art process engineering and design, and leading-edge project execution systems help you to ensure the success of your project throughout its lifecycle – from concept to commissioning.

ENERGY MINERALS

You can rely on our technical, industrial and operational expertise in exploration, production and commercial activities to enable more growth and generate lean efficiencies across all aspects of the coal industry.

TRADE SUPPORT

Across North America and around the globe our trade team reduces commercial risk by ensuring that your shipments meeting contractual specifications and international standards in respect to quality and quantity. Our globally trusted inspectors and samplers are well-trained who represent your best interest at ports, warehouses and facilities around the world.

ENVIRONMENTAL SUSTAINABILITY

Our environmental sustainability for the mining industry focus on helping you develop a truly sustainable environmental mitigation strategy. We have the technical expertise to provide effective mitigating strategies and innovative, practical solutions that reduces the environmental impact of your operations by looking at water related issues from the early stage of metallurgical process development.

CONTACT INFORMATION





WHEN YOU NEED TO BE SURE



Trail Operations Teck

Teck Metals Ltd. - Analytical Services PO Box 1000 25 Aldridge Avenue

Trail, BC V1R 4L8 Canada

Tel. (250) 364-4587 Contact: Richard Magner

Superintendent, Analytical Services

E-mail: richard.magner@teck.com

Website: www.teck.com

Teck Trail **Operations**

Analytical Services

Teck Trail Operations

Teck Trail Operations is one of the world's largest fully integrated zinc and lead smelting and refining complexes. The metallurgical operations produce refined zinc and lead, a variety of precious and specialty metals, chemicals and fertilizer products. We produce between 305,000 to 310,000 mt of zinc and between 70,000 to 75,000 mt of lead annually.

Trail Operations is the region's largest private sector employer, with approximately 1,400 employees and 200 contractors on site at any one time. We support the communities in which we operate through \$200M in wages and salaries, \$218M in local spending on goods and services, \$42M in taxes and licenses, and support of over 165 charitable organizations

Trail Operations has made significant investment in environmental improvements, reducing emissions to air and water by over 95% since the mid-1990s. Major investments include the KIVCET Furnace, No. 1 and No. 2 Acid Plants, Effluent Management, the Smelter Recycle Building and the Groundwater Treatment Plant,

Analytical Services

The Teck Trail Operations Analytical Services group provides all of the testing services for Trail Operations on a 24/7/365 basis. This includes testing the raw materials shipped to Trail for processing, the intermediate in-process samples from production plants, final products, and samples to support other business areas: Environment, Health & Safety, Business Development, Metallurgy & Technology and Technical Services, Trail. Approximately one-seventh of the testing done at Analytical Services is in support of protecting the environment.

In the course of a year, our 27 full-time chemical assayers provide analyses for 130,000 to 140,000 samples. With approximately eight tests per sample, the laboratory reports approximately one million test results per year. The laboratory is equipped with state-of-the-art instruments, including a fully-automated zinc analysis system that uses a robot to manage the samples and standards, ICP-OES instruments, ICP-MS instruments, AA spectrometers and

Quality assurance is maintained by a number of system elements: trained technicians, internal and external audits (QMS and EMS), customer visits, external proficiency testing, use of QA/QC materials, quality policy, customer surveys, mission statement and core values. Since 2010, the laboratory has been maintaining and developing a



2021–2022 CMA Corporate Members

Listed below is the first CMA Corporate Member for 2021–2022. The CMA thanks Beckman Coulter for their support of the CMA.

Beckman Coulter Canada LLC



Beckman Coulter Canada LLC 7075 Financial Drive Mississauga, ON L5N 6V8 Canada Tel. (416) 475-9274 Contact: Chris Hrabchak

Senior Sales Representative E-mail: chrabchak@beckman.com
Website: www.beckman.com

Call for Interest in Hosting a Future CMA Conference and Exhibition

The CMA Conference and Exhibition relies on individuals and organizations to volunteer to organize and host the annual Conference. Currently, the CMA is canvassing its members, exhibitors and other interested parties to secure a host and venue for a future Annual CMA Conference and Exhibition to be held in mid-September each year.

Ideally, the annual CMA Conference and Exhibition should shift back and forth between Eastern Canada and Western Canada.

If you are interested in hosting a future CMA Conference and Exhibition, please contact Ed Debicki, Managing Secretary.

Members-only Page on CMA Website

At the 2017 CMA Business Meeting held in Kamloops, BC, a decision was made to no longer produce a Conference DVD with delegate and exhibitor lists, technical papers, photographs, etc. The rationale for this decision was to eliminate the cost of producing and mailing the DVD, plus the changes in computer technology wherein many computers no longer have a DVD player.

In its place, a Members-only Page was established on the CMA website. The content consists of the list of delegates and exhibitors, technical papers, and photographs for each annual Conference starting with the 2017 CMA Conference. It also includes the presentations made by authors who agreed to have their presentations on the website. The Members-only Page is accessible to CMA individual and corporate members, and the delegates and exhibitors of the annual CMA Conference and Exhibition. It is accessible by username and password. Everyone eligible to access the Members-only Page is sent the username and password by e-mail.

Newsletter Submissions for Next Issue

Submissions for the Canadian Mineral Analysts (CMA) Newsletter are always welcome. Feel free to send in news and updates that will be of interest to the CMA membership. Retirement notices and People on the Move submissions are always welcomed.

The next issue of the CMA Newsletter is scheduled for December 2021.

Submissions should be forwarded to Ed Debicki, Managing Secretary, no later than November 26, 2021.

CMA Individual and Corporate Memberships

The 2021 CMA Conference and Exhibition scheduled for Montréal, October 17 - 21, 2021 has been CANCELLED due to COVID-19. As a result, the CMA will not generate any Conference revenue for 2021. It will be forced to rely heavily on its financial reserves and funds from 2021–2022 memberships if it is to fund its \$1,000 scholarships to students studying fire assaying and chemical engineering technology at Canadian colleges. These students are the future of our industry. The CMA is your organization, and your 2021–2022 memberships (September 1, 2021 to August 31, 2022) are very important.

CMA Individual Membership for 2021–2022

The Canadian Mineral Analysts (CMA) invites you to become an Individual Member. The membership year runs from September 1, 2021 to August 31, 2022.

An Individual Membership Form is included at the end of this Newsletter. The Individual Membership Form and the Benefits of Individual Membership can be found on the CMA website on the 'Individual Membership' page:

http://www.canadianmineralanalysts.com/Individual-Membership.html

Individual Membership Fees for 2021–2022: Renewal / New: \$50.00

Senior (65 and over) / Inactive: \$25.00 Student: \$25.00

The completed Form and payment (cheque payable to 'Canadian Mineral Analysts') can be mailed to Ed Debicki, Managing Secretary, to the address on the Form.

Payment can also be made using Interac e-Transfer by sending an e-mail to Sean Murry, CMA Treasurer, at e-mail: wsmurry@hotmail.com. Be sure to send Sean Murry the answer to your secret question.

CMA Corporate Membership for 2021–2022

The Canadian Mineral Analysts (CMA) invites all companies and organizations to become a Corporate Member for 2021–2022. The membership year runs from September 1, 2021 to August 31, 2022.

A Corporate Membership Form is included at the end of this Newsletter. The Corporate Membership Form and the Benefits of Corporate Membership can be found on the CMA website on the 'Corporate Membership' page:

http://www.canadianmineralanalysts.com/Corporate-Membership.html

Corporate Membership Fee for 2021–2022:

Renewal / New:

\$500.00

The completed Form and payment (cheque payable to 'Canadian Mineral Analysts') can be mailed to Ed Debicki, Managing Secretary, to the address on the Form.

Payment can also be made using Interac e-Transfer by sending an e-mail to Sean Murry, CMA Treasurer, at e-mail: wsmurry@hotmail.com. Be sure to send Sean Murry the answer to your secret question.



Overview of the Canadian Mineral Analysts (CMA)

The Canadian Mineral Analysts (CMA), formed in 1969, is an association of: 1) Canadian earth science, mineral exploration and mining analytical laboratories in government, academic institutions, the mining industry, and the private/commercial sector; 2) manufacturers and suppliers of instruments and equipment for analytical laboratories; and 3) suppliers of laboratory consumables.

The annual CMA Conference and Exhibition is held in mid-September in a different Canadian city. The first Conference was held in Rouyn–Noranda, Québec in 1969.

The mission of the CMA is to 'communicate analytical technologies in the Canadian mining industry'.

The CMA is a not-for-profit organization with membership dues and proceeds from the annual CMA Conference and Exhibition used to provide: 1) scholarships for Canadian college and university students studying fire-assaying and/or chemical engineering technology, and 2) equipment and program grants to qualified fire-assaying and/or chemical engineering technology programs in Canadian colleges and universities.

The CMA membership year was revised in 2018 to run from September 1st to August 31st of the following year. The 2021–2022 membership year will run from September 1, 2021 to August 31, 2022.

The CMA does not operate with a formal executive committee. The CMA Steering Committee (SC) comprised of the CMA Treasurer (Sean Murry), CMA Managing Secretary (Ed Debicki) and a CMA member (Jonathan Forrest) serves as the CMA's informal executive. The SC's duties are: 1) seek out organizations and individuals who are willing to take on the CMA Conference in future years, and 2) review and approve applications for scholarships and equipment/program funding. The SC is also responsible for administration of the CMA membership and finances.

For information about the Canadian Mineral Analysts, please visit the CMA website or contact:

Ed Debicki CMA Managing Secretary 629 Ester Street Sudbury, ON P3E 5C6 Tel. (705) 522-5140 Cell: (705) 923-5383

E-mail: ed.debicki@sympatico.ca

CMA website: www.canadianmineralanalysts.com

Newsletter Credits

This August 2021 CMA was put together by Ed Debicki, CMA Managing Secretary.

Thank you to Ruth Debicki who applied her proof-reading and editorial skills to improve the Newsletter.

A special thank you goes to George Feilders, Sean Murry, Lisa Atkins, Peter Cavender, Richard Magner, Kriss Leftwich, the eleven 2020–2021 CMA Corporate Members, the one 2021–2022 CMA Corporate Member, OREAS, and CALA for their contributions to the Newsletter.





Canadian Mineral Analysts Analystes canadiens des minéraux

www.canadianmineralanalysts.com

Communicate analytical technologies in the Canadian mining industry Communiquer les technologies analytiques dans l'industrie minière canadienne

INDIVIDUAL MEMBERSHIP FORM

Name:	(PLEASE PRINT CLEARLY)						-		
Job Title:									-
Company:									-
Address:	Street:								-
	Suite / Apt.								_
	City:					Province / S	state:		_
	Postal / Zip Code:	:				Country: _			_
Telephone:	Home:	(_)						_
	Work:	(_)				Ext.:		_
	Cell / Mobile:	(_)						_
Fax:	Fax:	(_)						-
E-mail:	E-mail:					_ @			_
Website:	Website:								_
Alternate contact in	nformation (home or o	office) can	be inc	cluded	on the bac	k of this Form.			
Annual Fees:	Renewal / New: Senior (65 & over) / Student:			CDN	\$25.00		Membership y from Septemb August 31st of		ar
	(Annual dues are pa	ayable on	Septe	mber 1	er of each y	/ear)			
Payment:	Please return this and cheque / mon- or cash to:			629 E	Managing ster Street	Secretary 3E 5C6 Canada	mone 'Canad	e make cheque o by order payable t dian Mineral Analys	to:
	Interac e-Transfer (Note: be sure to s						the secret que	estion)	
Permission:	I hereby give the	CMA po	ermis	sion t	o contac	t me via e-ma	ail: Yes:□	No: □	

Year: 2021 - 2022



Canadian Mineral Analysts Analystes canadiens des minéraux

www.canadianmineralanalysts.com

Communicate analytical technologies in the Canadian mining industry Communiquer les technologies analytiques dans l'industrie minière canadienne

CORPORATE MEMBERSHIP FORM

Company:						
	(PLEASE PRINT CLEARLY)					
Contact:						
Job Title:						
	Street:					
	Suite / Apt.					
	City:			Province / State:		
	Postal / Zip Code:			Country:		
Telephone:	Home:	()	_)			
	Work:	(_)		Ext.:	
	Cell / Mobile:	(_)			
Fax:		()	_)			
E-mail:				@		
Website:						
	Alternate contact in	formation	(home	or office) can be included on the back	k of this Form.	
Annual Fee:	Renewal / New:				ership year runs from	
	(Annual fee is payable or	n September	1st of e		August 31st of the following year	
Payment:	Payment: Return completed Form and cheque / money order / or cash to:		Ed Debicki CMA Managing Secretary 629 Ester Street Sudbury, ON P3E 5C6 Canada	Please make cheque or money order payable to: 'Canadian Mineral Analysts'		
	Interac e-Transfer: send e-mail to: wsmurry@hotmail.com (Note: be sure to send Sean Murry, CMA Treasurer, the answer to your secret question)					
Corporate Logo:	Please send a cop	y of your	corp	orate logo (jpeg format) to: ed.deb	icki@sympatico.ca	
Permission:	I hereby give the	CMA pe	ermis	sion to contact us via e-mail:	Yes: □ No: □	

Year: 2021 - 2022