



SEG Canada Foundation

SOCIETY OF ECONOMIC GEOLOGISTS CANADA FOUNDATION FONDATION DE LA SOCIÉTÉ DES GÉOLOGUES ÉCONOMIQUES DU CANADA

P.O. Box 48113 • 595 Burrard St., Bentall Centre • Vancouver, BC V7X 1N8 • Tel. (604) 816-3012 • E-mail: segcanadafoundation@gmail.com

2022 Annual Report

(All amounts in \$CDN unless otherwise stated)

Summary

The 2022 year was unfortunately dominated by uncertainty surrounding the SEG Canada Foundation's (SEGCF) charitable status. Early in 2022, the SEGCF board became aware of a letter from the Canada Revenue Agency (CRA), dated February 5, 2021, revoking the Foundation's charitable status. The reason for the revocation was that our annual reports to CRA for 2018, 2019 and 2020 were not filed in a timely manner. After becoming aware of the situation, Gerry Carlson and Salvador Miranda worked with CRA, lawyer Mike Kray, our auditors and with Ian Gamble (tax lawyer with Thorsteinssons, a well-respected legal firm specializing in tax law) to resolve the issue.

On April 22, we submitted the necessary forms for charitable status reinstatement, along with a \$500 fee. We were subsequently notified by CRA that our application was under review, subject to the submission of our 2021 annual report, which was filed prior to the June 30, 2022 deadline. Fortunately, on November 10, 2022, CRA reinstated charitable status to the foundation retroactive back to the date that it was revoked.

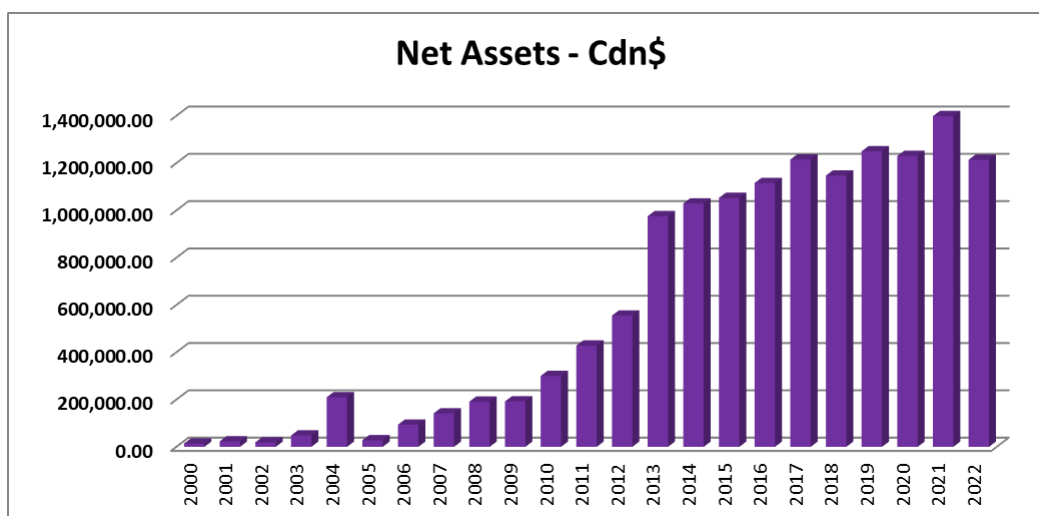
Owing to uncertainty surrounding charitable status, we were unable to fundraise for most of the year since we were unable to issue tax receipts to donors. Fundraising links to the SEGCF were removed from the SEG website but these are live once again.

Despite this setback, the SEGCF remains on a strong financial footing thanks to consistent support from mining and exploration companies and individual SEG members over the years. Additionally, revenues from the SEG's 100th anniversary annual meeting, SEG100, held in Whistler in September 2021 have bolstered the fund. As a result, we have been able to successfully continue our high level of financial support for student programs.

I would like to express my appreciation to our Board of Directors, who provided a strong level of support during the year. A vote of thanks goes out also to our many volunteers, including our Student Grant, Fellowship and Scholarship volunteer reviewers and our tireless Fundraising Committee led by Gerry Carlson. Finally, I would like to especially thank Salvador Miranda who has joined our team as our new accountant and was instrumental in petitioning CRA to reinstate charitable status to the Foundation.

Financial Results

At December 31, 2022, the SEG Canada Foundation's unrestricted net assets stood at \$ 1,212,004 compared with \$1,391,750 a year earlier. Donations totaled \$29,826 (2021 - \$58,530) while awards paid were \$113,393, compared to \$122,283 in 2021. Office and accounting expenses, including management fees for our investments, reached \$69,418 (2021 - \$52,145). In total the excess of expenses over revenue was (\$179,738), compared to an excess of revenue over expenses of \$167,734 in 2021. The 2022 loss was largely due to a weak performance in the Leith Wheeler portfolio which resulted in \$31,889 in investment loss compared to an investment gain of \$148,282 in 2021.



The Canada Foundation invests approximately 80% of its financial assets in a conservative portfolio of equities and bonds with Leith Wheeler Investment Counsel Ltd. ("Leith Wheeler"). The balance of the Canada Foundation's cash is deposited in its chequing accounts and in GIC's at minimal interest rates.

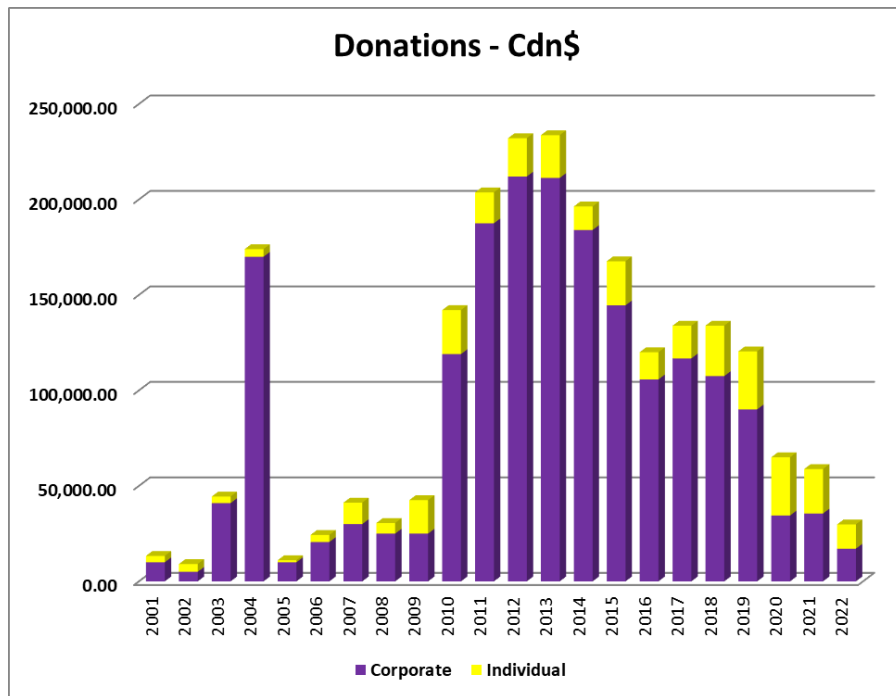
The foundation's long-term investment strategy with Leith Wheeler rests on the following principals:

- Investing in financial instruments that ensure the principal is adequately protected and not at
- undue risk from general market fluctuations;
- Ensuring the rate of return on long-term investments is not less than the annual adjusted rate of inflation.

The total amount of the investment with Leith Wheeler at year end was \$1,104,617 with a net annualized loss of 3.73% (2021 - \$1,147,424, annualized return of 10.79%).

Fundraising

Due to the loss of our charitable status we did not undertake a fundraising campaign this year. As a result, our donation total was \$29,826 compared with \$58,530 last year. Teck Resources, Equity Exploration Consultants Ltd. and Leith Wheeler are our only corporate sponsors this year, contributing \$17,100. Personal donations totaled, \$12,726. Corporate and individual donors are listed in Appendices I and II.

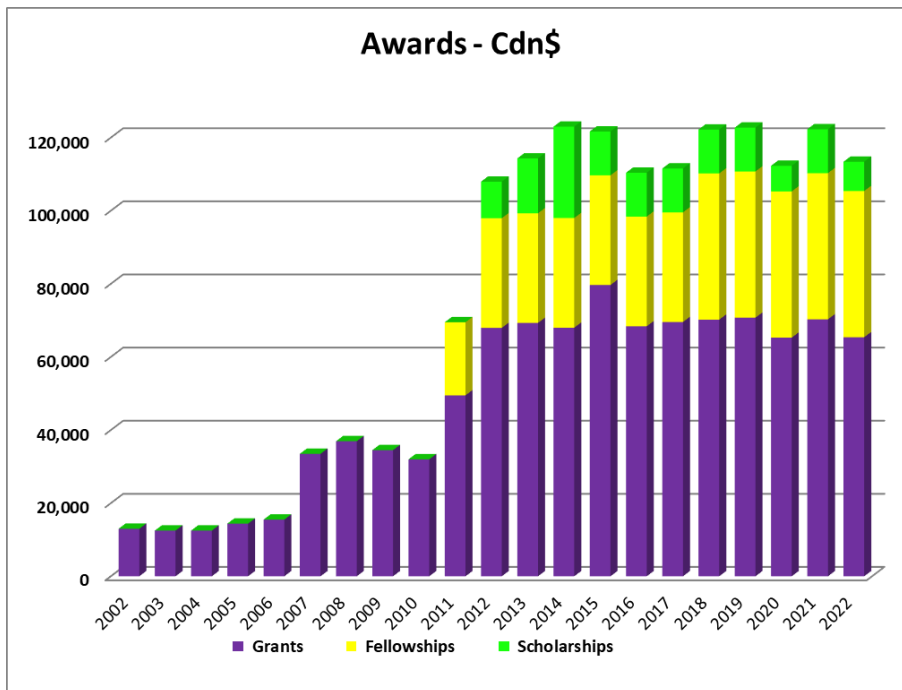


Awards

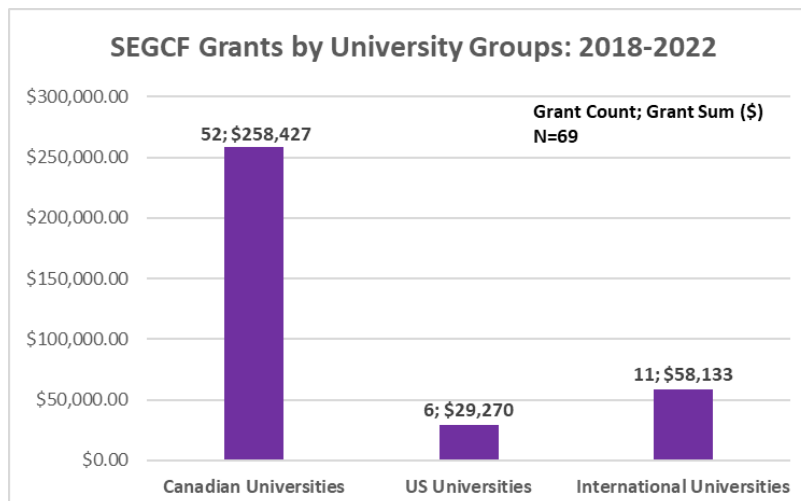
The SEGCF currently supports three separate awards (Appendix III): Student Research Grants, Graduate Student Fellowships and Undergraduate Scholarships. We have distributed \$1,556,115 in awards since inception.

Student Research Grants are available to support graduate student thesis research leading to masters or doctoral degrees in Economic Geology and are typically directed towards field expenses or analytical work related to the thesis project. The SEGCF awarded 14 grants totaling \$65,393, compared to \$70,283 (13 Grants) in 2021.

SEGCF Graduate Student Fellowships are available for a one-year term to students who intend to pursue a course of study in economic geology leading to masters or doctoral degrees in Economic Geology. Canada Foundation Fellowship awards for 2022 totaled \$40,000 (7 Fellowships), unchanged from 2021.



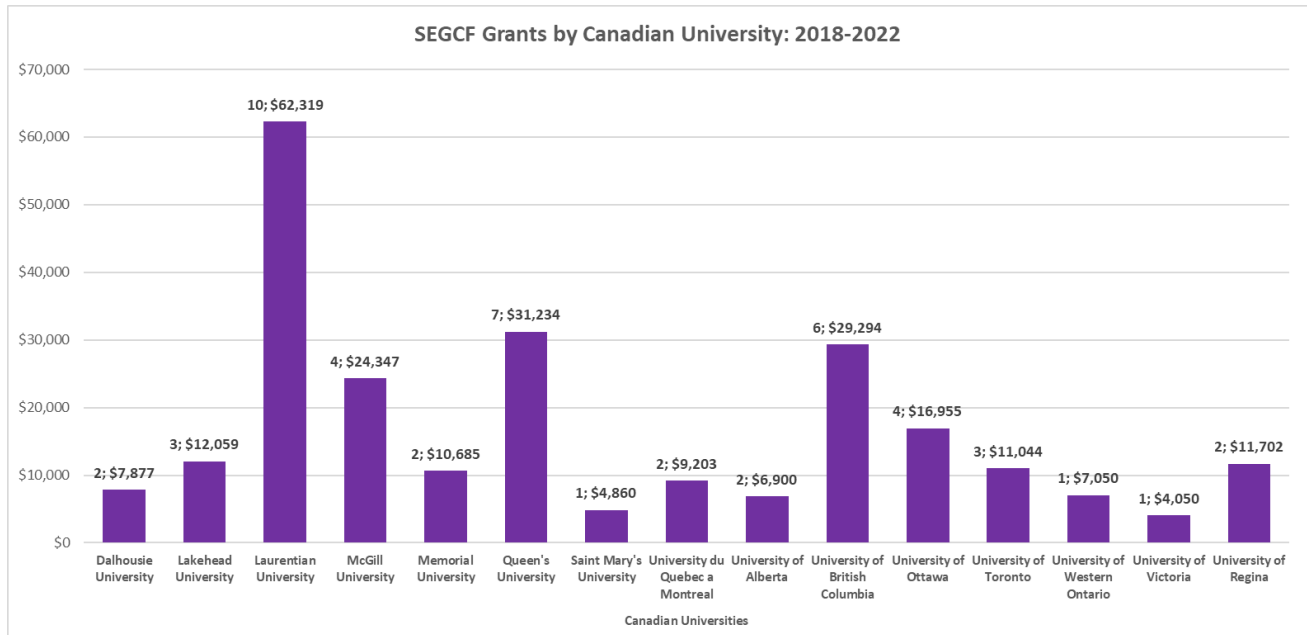
Our SEGCF Undergraduate Thesis Scholarship program supports field or laboratory work related to a senior thesis in Economic Geology at recognized Canadian universities. Each year, 12 scholarships of \$1000 each are available. This year we awarded eight scholarships, compared with 12 in 2021. For the past three years we have seen low scholarship application numbers. In 2020, we only had seven applicants, which we attributed to issues related to COVID-19. In 2021, we received 13 applicants and this year we only received eight applications. This reason for the decline in the number of applications this year is unclear but some promotion among thesis supervisors is seemingly warranted.



Over the past 5 years, 69 SEGCF grants have been awarded to students at universities worldwide. Although overwhelmingly the students are studying at Canadian universities (see bar graph above) an estimated 62% of those students are non-Canadian. If we only look at 2022, however, nine of 14

students (64%) are Canadian, 13 students are studying at a Canadian University (Appendix III) and nine of the projects are on a Canadian property.

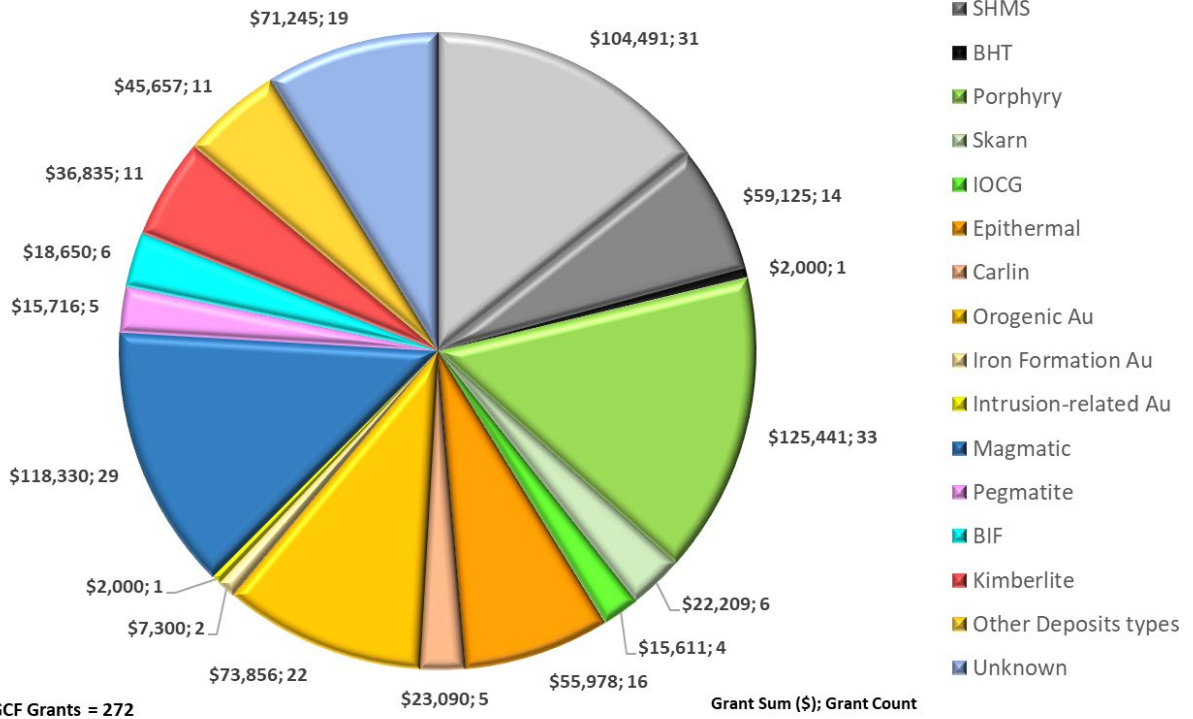
The bar chart below illustrates the number of SEGCF Grants and dollar amount awarded to Canadian Universities over the past five years. Students from 15 different Canadian Universities have received SEGCF Grants during the period from 2018 to 2022.



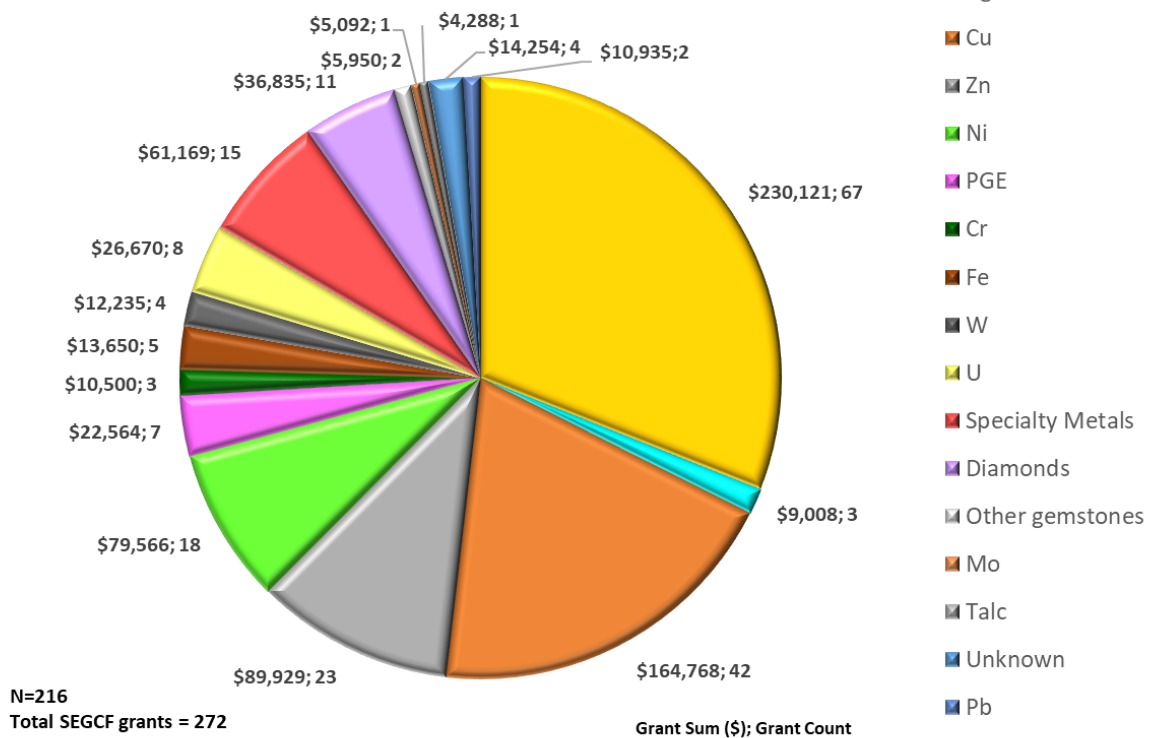
Since 2002, the Canada Foundation has awarded 272 SEG Grants (167 PhD projects, 102 MSc projects and 3 BSc project). Of these, 216 were for deposit-related studies and the balance were split amongst purely lab based, geochemical, structural, regional, environmental or other non-deposit specific studies. The following pie charts illustrate the diversity of the deposit-related studies by deposit type and primary commodity. The charts effectively demonstrate that the Canada Foundation grants have contributed to a broad range of mineral deposit research.

A complete list of student Grants, Fellowships and Scholarships is included as Appendix III. The Grant review committee is too large to list here but can be found on the SEG website. The Fellowship review committee consisted of Marek Locmelis, Sarah Dare, Lionnel Ngue Djon and Louise Schoneveld and the Undergraduate Scholarship committee consists of Lucy Hollis, Ross Sherlock and John Morganti.

SEGCF Grants by Deposit Type

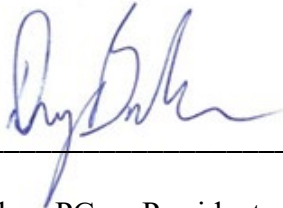


SEGCF Grants by Primary Commodity



In closing, I would like to express my personal thanks to the board of directors for their efforts in maintaining a healthy society. I would also like to thank our sponsors and donors, without whom the awards, grants and scholarships the Canada Foundation provides would not be possible.

Sincerely,
Society of Economic Geologists Canada Foundation



Darcy Baker, PGeo, President

2022 SEG Canada Foundation Team:

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Brian G. Hoal, Secretary
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Britt Bluemel
Garth Kirkham
Ross Sherlock
Lawrence Winter
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Nawojka Wachowiak

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Ross Sherlock
John Morganti

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Kirstie Simpson

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C. Michael Kray, LL.B.

Auditor

Manning Elliott LLP

About SEGCF

The SEG Canada Foundation (“SEGCF” or the “Canada Foundation”) was established in 1999 to facilitate charitable contributions by Canadian exploration and mining companies and members of the Society of Economic Geologists (“SEG”) in support of innovative research and education in economic geology. The Canada Foundation is modelled on the SEG Foundation, which, since it was founded in 1966, has provided over US\$6.5 million in support of SEG’s worldwide programs for student research, field trips, SEG Student Chapters and other educational activities.

The Canada Foundation’s objective is to support a broad range of activities that will enhance the qualifications of young geoscientists, improve the quality of professional geoscience work and underpin research with respect to all aspects of economic geology. The core activity of the Canada Foundation is to provide financial support in the form of Scholarships, Grants and Fellowships for fourth year undergraduate and graduate university students. We also support SEG Student Chapter activities, including field trips, short courses, symposia and other innovative projects that support education and research in economic geology. Our goal is to help develop skilled economic geology and minerals exploration professionals.

Since its inception, SEGCF has raised \$2.51 million. Of that amount, \$1,556,115 has been awarded to support undergraduate and graduate student thesis research in economic geology and \$176,000 has funded the Hugo Dummett historical *Economic Geology* DVD. The Canada Foundation has also supported the activities of SEG Student Chapters.

Appendix I
SEGCF Corporate Donors – 2022

Patron Sponsors

Teck

Silver Sponsors



Appendix II
SEGCF Individual Donors – 2022

Adu Gyamfi Agyapong
Luis Arauzo
Ingemar Arellano
Fred Barnard
Peter Bell
Gary Billingsley
David Blann
Robert Bowell
Alexander Brown
Remi Charbonneau
Francis Chartrand
Andre Ciesielski
Christopher Cooper
Lindsay Craig
Peter Dadson
Fionnuala Devine
Frederick Edmunds
Peter Fischl
Ralph Gonzalez
Twila Griffith

Lee Groat
Mark Hannington
Walter Hanych
John Harrop
Evan Hastie
Michael Hocking
Glen House
Charles Jefferson
Daniel Jiricka
John Keating
Rob Krcmarov
Martin Lenters
James Logan
Susan Lomas
Anthony L'orsa
Henry Marsden
Brigette Martini
Sean Mckinley
Roger Moss
Gema Olivo

Reginald Olson
Clovis Parente
Petr Pelz
Stephane Perrouty
C. Mark Rebagliati
Matthew Rees
Edward Reeve
Malcolm Robb
Francois Robert
James Scoates
Robert Sharp
Ross Sherlock
Christiaan Staargaard
John-Mark Staude
Hugh Stewart
Anne Thompson
Phillip Walford
Rimant Zalnieriunas
Dawn Zhou

Appendix III - SEGCF Student Awards – 2022

*Note: these award amounts were approved by the Board and awarded to students in the currency of their choice. Some of the students received their funds in USD, therefore, the exact Canadian dollar amount of those awards shown in the financial statements may be different than what is listed above due to exchange rate conversion.

Graduate Student Grants - 2022					
Name	Award (US\$)	Award (C\$)	University	Level	Topic
Lindsey Abdale	\$2,000	\$2,564	University of British Columbia	PhD	On the feasibility of imaging carbonatite-hosted rare earth element deposits using remote sensing
Kiera Broda	\$4,400	\$5,642	McGill University	PhD	The application of Fe Isotopes to understanding assimilation/redox-driven fractionation and concurrent magmatic Ni-Co mineralization
Connor Caglioti	\$4,000	\$5,129	Lakehead University	MSc	Geochemistry and mineralization of the Mesoproterozoic Escape Intrusion
Ben Eaton	\$5,000	\$6,411	University of British Columbia	MSc	Deep Learning & Drift Prospecting: machine learning classification of Cu-porphyry indicator minerals by optical microscopy- μ XRF-SEM in the Kemess District.
Edgar Eck	\$2,400	\$3,077	Colorado School of Mines	MSc	Geochemical and Geological Study of the TV-Jeff VMS Deposit in British Columbia, Canada
Tyler Hnatiuk	\$2,100	\$2,693	University of Manitoba	MSc	Rare-earth potential associated with carbonatite magmatism in the Superior Boundary Zone, Manitoba
Allison Howes	\$5,000	\$6,411	Queen's University	MSc	Using non-conventional isotopes for constraining the genesis of banded iron formations from the Bathurst Mining Camp, New Brunswick
Derek Leung	\$4,000	\$5,129	Laurentian University	PhD	All that glitters is gold? The spectroscopy, trace-element chemistry, genesis, and exploration implications of green micas associated with gold deposits
Mary Macquistan	\$3,300	\$4,231	University of British Columbia	MSc	Mineralogical and geochemical characterization of the Gun occurrence, Yukon Territory, Canada
Rémi Naulot	\$4,800	\$6,155	University of Quebec at Chicoutimi	MSc	Vectorising towards VMS and epithermal mineralisations using carbonite alteration: case study of Selbaie area (Quebec, Canada)
Peteris Rozenbaks	\$3,000	\$3,847	Dalhousie University	PhD	Vanadium partitioning between apatite and biotite as a potential oxybarometer
Dylan Spence	\$4,300	\$5,513	University of British Columbia	MSc	Subduction Zone Magmatism and Cr-Ni-Cu-PGE Mineralization Potential: Insights from Olivine Chemistry in the Tulameen Intrusion, British Columbia
Allison Surette	\$2,500	\$3,206	Queen's University	PhD	Analysis of long-term stability of filtered tailings from the Cantung Mine, Northwest Territories
Merve Uygur	\$4,200	\$5,385	University of Toronto	MSc	Geostastical Approaches for Mineral Resource Assessment of Seafloor Massive Sulfid Deposits
Total	\$51,000	\$65,393			

Graduate Student Fellowships - 2022

Name	Award (C\$)	University	Topic
Daryll Bien Concepcion	\$5,000	University of Toronto	Yukon hyper-enriched black shale (HEBS) study
Dallas Dixon	\$5,000	University of Saskatchewan	Orogenic gold deposits at the Seabee Gold Operation in northern Saskatchewan, Canada
Ben Eaton	\$5,000	MDRU, University of British Columbia	Drift prospecting & deep learning: Deep neural network classification of Cu-porphyry indicator minerals by data assimilation of SEM, μ -XRF, & optical microscope analysis
Remi Germain	\$7,500	Colorado School of Mines	Structural and tectonics project associated with the formation of the Appalachians in Nova Scotia
Tramaine James	\$7,500	Laurentian University	The Toroparu Au-Cu deposit, Guyana, South America; Paragenesis and structural controls on mineralization
Philippe Mongeau	\$5,000	Université Laval, Québec	The role of fluid-rock reactions on gold-endowment at the Meliadine gold district, Nunavut, Canada: a sulfur isotope study
Ryley Penner	\$5,000	University of Ottawa	Geodynamic controls on VMS deposit size and precious metal enrichments from geochemistry
Total	\$40,000		

Undergraduate Scholarships - 2022

Full Name	Award (C\$)	University	Advisor	Topic
Katherine Bormann	\$1,000	University of Toronto	Neil Bennett	Exploring the effect of REE cations on the properties of solar salt
Aida Buyers	\$1,000	Saint Mary's University	Jacob Hanley, Thomas Gemmell	Chemical Characterization of Melt Inclusions in Blake River Volcanics of the Swayze Area, Abitibi Greenstone Belt, Ontario
Andre Caratsch	\$1,000	University of Toronto	Dan Gregory	Hydrothermal alteration proximal to veins at the Lonestar deposit, Yukon Territory
Sar Craig	\$1,000	Queen's University	Gema Olivo and Stephane Perrouty	Mineralogical, Geochemical and Petrological Investigation of Conboy Lake Showings in the Archean Michipicoten Greenstone Belt, Wawa Subprovince, Canada: Implication for Base Metals and Gold Exploration
Arthu Hilliard	\$1,000	Dalhousie	James Brennan	Examining pyrite zonation and trace element indicators to identify auriferous fluid phases within the Lone Star Deposit, Yukon Territory, Canada
Kingslei Medina	\$1,000	University of Saskatchewan	Kevin Ansdell and Duncan F. McLeish	Tracking Pyrite Textures and Composition Through the Evolution of the Golden Marmot Target, Brucejack Au-Ag Deposit, British Columbia, Canada
Chelse Merrick	\$1,000	University of Toronto	Dan Gregory	The REDOX setting of the stratabound V mineralization at the Van property, Northwest Territories
Rache Webb	\$1,000	University of British Columbia	James Scoates	Chromite Petrochemistry of the Polaris and Tulameen Alaskan-type Intrusions in the Cordillera of British Columbia: Implications for Convergent Margin Magmatism and Ni-Cr-Cu-PGE Mineralization
Total	\$8,000			