

KEGS Foundation: 2021 Overview: Adaptation & Resilience

- **Overview 2021:** The past year was characterized by the continuing major disruption of normal activities by the Foundation as it dealt with all the impacts of the COVID-19 waves in the pandemic that began in March 2020. With the revival of the general economy and significant improvement in the resource sector stemming from extraordinary governmental efforts, there was a welcome increase in geophysical positions in both summer and full-time entry-level employment in the mineral sector. In this volatile and challenging environment, the Foundation successfully adapted and managed to maintain its core scholarship program (record \$38,100 awarded to 27 students at 15 universities for the current 2021/22 academic year). It established an important new scholarship for Indigenous students and another for Québécois. Other significant educational initiatives funded by the transformative legacy gift from Len and Genice Collett remained suspended. Comparable support for scholarships and related educational initiatives is forecast for the coming year, thanks to continuing donations encouraged by two new matching donation programs and income from conservatively invested endowments. A general renewal of in person activities both at universities and in the professional world is eagerly anticipated in the fall, although likely in a hybrid format, and affected by significant impacts on the resource sector and the geophysical community from the appalling destruction and disruption caused by the unwarranted Russian invasion of Ukraine.
- **Awarding of record \$38,100 for 27 scholarships for 2021/22:** As part of its efforts to offer increased support to dedicated and capable students in geophysics in dealing with the multiple impacts of the pandemic, the Foundation's Board made the decision to direct augmented funding for its core scholarship program for the 2021/22 academic year, drawing on funds usually allocated for other programs that were temporarily shelved. As a result, in evaluating applications from over 30 students, the Foundation was able to award 27 scholarships totaling a record \$38,100 for 2021/22, to 13 undergraduates, 7 M.Sc. students and 7 Ph.D. candidates attending 15 Canadian universities, as announced in July. This included the notable awards of the Collett Graduate Scholarship to Tianshi Liu (University of Toronto), the GSC Pioneers Scholarship to Gang Hui (University of Calgary), the newish SKGS Scholarship to Mark Lepitzki (University of Saskatchewan) and the KEGS Pioneers Scholarship to Stephanie Bringeland (Queen's University). Full details can be found in the announcement circulated in July and posted on the Foundation's website. Because of the pandemic, most awards were presented virtually in conjunction with KEGS and BCGS webinars and related special events.

- **Bourse des pionniers de la géophysique québécoise:** Following discussions at a pleasant online fête de Noël in December 2020 attended by many of the Québec geophysical community, a new scholarship was established in early 2021 directed at supporting an outstanding student in geophysics attending a Québec university and intended to honour various notable Québécois geophysical pioneers and entrepreneurs, thanks to an initial commitment of support by Abitibi Géophysique. The initial award of this scholarship, designated *Bourse des pionniers de la géophysique québécoise*, was made in the fall to Adrien Dimech, a Ph.D. candidate at UQAT, whose research is focused on monitoring resistivity via a permanent array to determine the inferred water content in mine tailings impoundments.
- **Michael and Patricia Carson Geophysics Scholarship for Indigenous Students:** Thanks to a substantial donation by Michael and Patricia Carson, and supported by family and friends of Mike, the Foundation established a scholarship to be awarded annually to an Indigenous student who is pursuing post-secondary studies in geophysics or geophysical technology at a Canadian university or college. Mike passed away weeks later. He had a lengthy and productive career with Geotrex/CGG/Fugro, based in Ottawa. The inaugural recipient of the Carson Scholarship is Ray Guerard, who is in his second year as an undergraduate in Geological Sciences at the University of Manitoba, majoring in geophysics. Ray is a Métis student with family ties to the Ebb and Flow First Nation located along the western shores of Lake Manitoba.
- **Steers Bursary:** The Foundation acts as the fiduciary for the endowment established by family and former colleagues to support a Bursary honoring the late John E. Steers, who had a long and notable career in mineral exploration, and shares administration of the Bursary with the long-standing Canadian Mineral Industry Education Foundation (CMIEF). As selected from a slate of strong geoscience students from across Canada, the Bursary for the current year was awarded to an outstanding student, Nicole Freij, who is completing her undergraduate studies at the University of Toronto this spring, with a focus on economic geology.
- **SEG Foundation 2021-22 scholarship awards:** The Foundation is pleased to report that the SEG Foundation awarded 18 scholarships to 11 Canadian students for the current academic year (the majority Ph.D. candidates), and extends particular congratulations to current and past KEGS Foundation awardees who also received SEGF scholarships, including Kaitlyn de Morée van Lierde, B.Sc. candidate at Carleton University, who again received the KEGS/Phillip Hallof Memorial Scholarship administered by the SEG Foundation.

- **Response to continuing COVID-19 pandemic:** The KEGS Foundation, in response to the various COVID-19 waves and responses, sought to maintain and adapt its educational efforts along with initiatives to focus on ways to assist current scholarship recipients and other students to continue with their geophysical education in the virtual universe that has come to dominate academic, professional and social interactions. The Foundation also endeavoured to keep informed as to how different universities adapted their instructional programs to a mainly virtual format to accommodate health concerns. In addition, together with many other charitable and non-profit organizations, the Foundation faces the continuing challenge of maintaining support from the geophysical and exploration community for its core scholarship program as well as preserving the value of its accumulated endowments in the face of volatile equity markets and economic uncertainty. While the pandemic unleashed a tsunami of negative impacts, it has induced a variety of positive changes, notably the widespread adoption of online platforms such as Zoom and global access to virtual presentations and events, the strengthened recognition (by most) of the importance of science in many aspects and issues of modern society, and the emergence across Canada of a diverse new generation of able health professionals and researchers.
- **Social media and student outreach:** In collaborative initiative with KEGS, the Foundation is being guided by recent graduate Skyler Mallozzi, a past scholarship recipient, in developing an enhanced social media presence to strengthen awareness by and communications with the current generation of media-savvy students, acting as student liaison. This has been particularly valuable over the past year in understanding the challenges and stresses students have faced in dealing with mainly online instruction.
- **Alumni affairs:** The Foundation continues to follow with interest the careers of the now more than 300 past scholarship recipients as they pursue further education and ultimate employment, and encourages donations to the Foundation by past awardees with established careers to support current and future students. It is noted with pleasure that several of the authors of presentations at the (virtual) 2022 KEGS Symposium were past recipients of scholarships from the KEGS Foundation.
- **Collaboration with KEGS and other organizations:** The Foundation has continued its efforts to collaborate closely with KEGS, BCGS, TGDG and other geo-organizations in advancing geophysical and related education and in achieving useful synergy between groups and events, particularly in a period of mainly virtual mode interactions. With the anticipated transition in the fall back to a 'new normal' likely characterized by hybrid events, this effort will be extended to encompass joint or collaborative meetings and lectures.

- **Suspended programs:** As a result of the pandemic and related social and travel restrictions, and the largely online format for events and seminars, the Foundation suspended various programs, notably its popular visiting KEGS Special Lecture program (partially replaced by global access to a greatly expanded array of webinars and other online presentations), and cancelled the Collett Visiting Lectureship, the Collett Research Assistantship, the pre-XTMAS Mini-symposium and the customary Reunion Party during the 2021 PDAC. It is anticipated that most of these events will be revived (likely with some modifications) as conditions evolve towards a new normal in the fall.
- **Financial overview:** While stock markets remained highly volatile in reacting to various 'black swans' and economic uncertainty, thanks to its conservative investment policy the Foundation's accumulated endowments did largely recover from the spring 2020 significant erosion in value, primarily that portion of its diversified portfolio invested in equities and bonds. Donations increased overall, but this primarily reflected the very generous gift by Michael and Patricia Carson to establish the new scholarship for indigenous students, supported by donations by various colleagues and friends. Donations to the General Fund remained low, which has led to renewed efforts to attract more donors, particularly from among mining companies, to ensure that the core scholarship program could be funded at a robust level without diverting funds from cancelled Collett programs, as was done in the current year.

In the larger frame, massive government stimulus programs and aggressive monetary actions by central banks succeeded in stabilizing the global economy and setting the stage for ultimate recovery and renewed growth seen in the past year. Also fortunately, exploration and mining were deemed to be essential activities. Concerns about the supply of critical minerals and metals the national and global economies drove sizable increases in the price of various commodities, which spurred a strong revival of mineral exploration in Canada and elsewhere, and in turn helped prompt renewed donations by a number of regular donors to the Foundation. In view of improving financial circumstances and the evident increased need by scholarship applicants, the Foundation renewed its scholarship program, with 27 awards totalling a record \$38,100, plus supplemental funding for meeting registrations, replacing customary travel bursaries.

The financial report for the Foundation for FY 2021 (ending July 14, 2021) was completed and circulated in early 2022, as well as posted on the Foundation's website, followed by submission of the annual tax filing required by the CRA. Thanks to a further rebound in the prices of equities and bonds, the Foundation's assets were approximately \$1.49 million as of July 2021, reflecting in large part the major Collett Legacy gift received in 2018.

- **Donations and fundraising efforts:** The Foundation acknowledges with appreciation all donations received in the latter part of 2021 from its sustaining and new donors despite the continuing impact of the pandemic. This was headed by the major gift by Michael and Patricia Carson to establish the new Carson Geophysical Scholarship for Indigenous Students. Particular appreciation is also extended for major donations by BCGS, Abitibi Géophysique, Lamontagne Geophysics, along with generous donations by Alan King Geoscience, Crone Geophysics, Ed Nichols, Frank Morrison, Doug Fraser and Clarice Steers, as well as support by Discovery International Geophysics, Dias Geophysics and Phoenix Geophysics for matching donation programs. With the recent upsurge in exploration, individuals and companies are encouraged to renew past support to sustain the Foundation's core scholarship program at recent levels as well as fund collateral efforts. Individual donors are reminded that they can double the impact of their tax-deductible donations by taking advantage of the continuing matching donation programs generously funded by Phoenix Geophysics, Discovery International Geophysics and Dias Geophysical (individual donations are eligible to be matched up to \$250 per year subject to overall annual funding caps of \$2,500; see Foundation website for details).
- **Governance:** The Foundation, guided by its volunteer Directors, continues to focus on maintaining relevance, effectiveness and financial viability in achieving its overall educational objectives by adapting to the ever-changing societal, business and technological environment, a continuing challenge in the past year coping with the diverse impacts of the pandemic plus the limited time that Directors are able to focus on Foundation programs and issues along with various administrative requirements, in addition to dealing with heavy professional demands. These included activities undertaken in collaboration with KEGS, BCGS and the SEG Foundation.

As announced at the AGM on March 9, the Board has accepted with regrets the resignation of two valued and long-serving Directors, Dennis Woods and Luise Sander. Francis Jones, geophysics instructor at UBC, has joined the Board as the representative of the BCGS, bringing new energy and initiatives to the general issue of attracting talented students to the field of geophysics, while KEGS Past President Robert Hearst (Southern Geoscience Consultants) serves as the KEGS representative.

- **Management:** Efforts are continuing to implement a more collegial governance structure with greater roles and designated responsibilities by each of the other Directors under the overall guidance of the Chair, Stephen Reford, along with building a diverse cohort of activist Counselors to provide advice and insights from across the spectrum of geophysical endeavours in Canada.

- **Board and General Meetings - March 9, 2022:** The preceding matters, including the outlook for the Foundation in 2022/23, were further considered at the recent annual Board meeting and the subsequent Annual General Meeting held via Zoom on March 9. The attached presentation reflect the matters presented and discussed at the virtual AGM, including the outlook for the Foundation's continuing efforts to support geophysical education, primarily via its renewed scholarship program for the upcoming academic year (2022/23), with application deadline April 30.

With appreciation for the continued support by the geophysical and exploration community,

Stephen Reford, Chair

Jerry Roth, Director

Additional details can be on the Foundation's website www.kegsfoundation.org.

KF22c31.2022 Annual Update

Bâtir l'avenir de la géophysique | Supporte les étudiants depuis 1999

Building geophysics' future | Supporting students since 1999



The KEGS Foundation AGM

March 9, 2022

Agenda

1. Annual update: Exploration industry: activity and employment
2. Directors: changes; thanks
3. Financial overview FY2021: Donations; investments; income
4. Acknowledgement of donors, especially sustaining donors
5. Scholarship program review: student feedback
6. Solidifying new initiatives
7. Outlook: scholarship and other programs 2022/23
8. Revival of actual meetings: PDAC June 13-15
9. Q & A participants

Help us build geophysics' future

Directors & Counselors

- Two long-serving Directors are retiring from the board:
 - Dennis Woods
 - Luise Sander
 - Our heartfelt thanks are extended for many years and hours of volunteer service to the Foundation
- Francis Jones, UBC, is joining the Board as designated representative of the BCGS
- We are currently renewing our cohort of Counselors from the academic and industry spheres, who advise, promote and otherwise assist the Foundation

New Scholarships

- **Bourse des pionniers de la géophysique québécoise (2021)**, principally supporting students in or from Québec
- **Michael and Patricia Carson Geophysics Scholarship for Indigenous Students (2021)**, for Indigenous students studying geophysics or geophysical technology
- **SKGS Scholarship (2020)**, primarily directed to supporting students in or from Saskatchewan

Major thanks to the foundational donors (Abitibi Géophysique, Carson family, Discovery International Geophysics, DIAS Geophysical) for these important new scholarships

Major Donors (2021, +\$1,000)

- Michael & Patricia Carson Carson Indigenous
- Family and friends of Michael Carson Carson Indigenous
- Abitibi Geophysics Bourse Québécoise
- BC Geophysical Society BCGS
- Phoenix Geophysics Matching funds
- Lamontagne Geophysics
- Alan King Geoscience
- Ed Nichols Bourse Québécoise
- Doug Fraser
- Frank Morrison Bourse Québécoise
- Peter Kowalczyk
- Balch Exploration Consulting
- Paterson, Grant & Watson Limited KEGS Pioneers
- Gregory Paleolog Carson Indigenous
- Lenore Fahrig Carson Indigenous
- Catherine Aitken Carson Indigenous
- IAGSA Carson Indigenous
- Clarice Steers Steers Bursary

Matching Funds Programs

- Since 2013, **Phoenix Geophysics** has been very generously matching individual donations to a maximum of \$250 each, with a \$2,500 annual cap
- As announced at the November SKGS meeting, **Discovery International Geophysics Inc.** and **Dias Geophysical Ltd.** are each generously matching donations to the SKGS Scholarship and the Carson Indigenous Scholarship to a maximum of \$250 per donation, with a \$2,500 annual cap
- All three companies are gratefully acknowledged for their initiative to spur donations and support the Foundation

Financial Overview

Fiscal year ending 14/07/2021 (See website for full 2021 financial statement)

	2021	2020
Revenue		
• Donations	\$57,090	\$27,170
• Restricted (Endowments)	\$46,700	\$12,600
• Unrestricted (General Fund)	\$10,390	\$14,570
• Symposia	\$0	\$2,598
• Collett income (net of investment fees)	\$26,682	\$40,842
• Realized income on maturing investments	<u>\$28,630</u>	<u>\$10,090</u>
	\$112,402	\$59,526
Expenditures:		
• Scholarships	\$26,000	\$21,750
• Collett initiatives	\$9,380	\$34,415
• Student expenses – travel and registration	\$996	\$888
• Administration/symposia	<u>\$338</u>	<u>\$5,859</u>
	\$36,714	\$62,912
Net Assets (14/07/2019)	\$1,287,316	
Net Assets (14/07/2020)	\$1,295,475	
Net Assets (14/07/2021)	\$1,347,370	
<i>Net Assets (14/07/2021 – market value)</i>	<i>\$1,487,985</i>	

2021/22 Scholarships

- 27 scholarships awarded
 - 12 undergraduate
 - 7 M.Sc.
 - 8 Ph.D.
 - 15 universities across Canada
- \$38,100 awarded in fiscal year 2021/22 – a record amount
 - Augmented by new donations and Collett funds in lieu of other programs cancelled by COVID-19

2021/22 Scholarships: New Awards



Ray Guerard

- Ray Guerard, inaugural recipient of the **Michael and Patricia Carson Geophysics Scholarship for Indigenous Students**
- Ray is currently in his second year as an undergraduate in Geological Sciences at the University of Manitoba, majoring in geophysics

- Adrien Dimech, Inaugural recipient of the **Bourse des pionniers de la géophysique québécoise**
- Adrien is pursuing a doctorate in geophysics at the Université du Québec en Abitibi-Témiscamingue (UQAT)
- He is investigating 3D electrical resistivity (ERT) for determining water infiltration in mine tailings impoundments

Adrien Dimech



2021/22 Scholarships: Significant Awards



Tianshi Liu

- Tianshi Liu is the recipient of the **Collett Graduate Scholarship**
- Tianshi is pursuing a doctorate in geophysics at the University of Toronto
- He is developing advances in full-wave seismic tomography applied to mantle and core characterization

Gang Hui



- Gang Hui is the recipient of the **GSC Pioneers Scholarship**
- Gang is pursuing a doctorate in geophysics at the University of Calgary
- He is undertaking an ambitious effort to integrate petrophysical characterization of fracture propagation for hydrocarbon exploitation and other applications

2021/22 Scholarships

Undergraduates

- Kaitlyn de Morée van Lierde [®] – Carleton University: WAMIC Scholarship
- Victoria Pereversoff [®] – University of Victoria: BCGS Scholarship
- Benjamin Clarke [®] – Memorial University: Limion Scholarship
- Alexi Morin [®], Jérémy Darveau, Jérôme Grenier, Pierre-Olivier Leroux – Université Laval
- Jérémy Gendreau [®] – Polytechnique Montréal
- Ryan Wang and Daniel Kahn – University of Toronto
- Dean Bucciarelli – Queen's University

2021/22 Scholarships

M.Sc.

- Stephanie Bringeland [®] – Queen’s University: KEGS Pioneers Scholarship
- Mark Lepitzki – University of Saskatchewan: SKGS Scholarship
- Moslem Azarpour – University of Saskatchewan
- Marziah Arshian – Memorial University
- Dimitri Danchenko – University of New Brunswick
- Taylor Tracey Kyryliuk – University of Ottawa
- Benjamin Saadia – Queen’s University

2021/22 Scholarships

Ph.D.

- Fatemeh Nemati – University of Victoria: BCGS Scholarship
- Jefferson Bustamente Restrepo – Polytechnique Montréal
- Megan Caston – University of Alberta
- Eric Lenhart – Western University
- Erkan Gun – University of Toronto

Student Feedback

- Renewed sense of career opportunities in geophysics
- Appreciative of the Foundation's support
- Fed up with online learning and virtual networking
- Concerned about the virtual PDAC in 2021 and June meeting in 2022: harder to connect with potential employers – Jobs board needed?
- Looking forward to meeting the students from recent cohorts
- Reminder to students to participate in the KEGS Symposium this month
(Scholarship recipients subsidized by the Foundation)

Outlook 2022/23

- Anticipated overall program spending of ~\$50,000
- Maintaining strong scholarship funding for 2022/23
- Renewal of Collett Visiting Lecturer (at PDAC 2023)
- Renewal of in person special lectures in fall 2022
- Broaden student participation in PDAC, KEGS and other events
- Possible travel grant program for Ph.D. students
- Improve outreach to students and faculty, especially to newer institutions offering limited geophysical instruction
- Seek greater support and involvement of mining companies for scholarships and early career initiatives
- Strengthen support for environmental and humanitarian geophysical applications and programs

Bâtir l'avenir de la géophysique | Supporte les étudiants depuis 1999

Building geophysics' future | Supporting students since 1999



Thank You

On behalf of the Board of Directors

Stephen Reford, Chair

sreford@kegsfoundation.org

(416) 368-2888 ext. 200

Office: 155 University Avenue, Suite 1510
Toronto, ON M5H 3B7

www.kegsfoundation.org