

GeoGazette

Winter 2020

Volume IX Issue II

President's Remarks: Kimberlea Green, P.Geo.

Season's greetings fellow Geoscientists! It is hard to believe I am half way through my term as President already! As other Presidents can attest to, this role is made enjoyable by the great supporting cast comprised of all the volunteers that give their time to Council and Committees; and of course, the commitment and experience of our Executive Director and Registrar!

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Season's Greetings from the Council



Members of Council (see page 18 for full list).

As with all things in 2020, my term has been anything but normal, but a great learning experience nonetheless (including Robert's Rules of Order – admittedly, I still have a lot to learn!). As CA's across the country continue to test various formats for AGM's and day to day operations, I have enjoyed connecting virtually with our Council and Committees, and look forward to the opportunity to meet some of our neighbouring geoscientists at the virtual NB (APEGNB) AGM this winter; and the virtual Nunavut (NAPEG) AGM. Our Association is planning our AGM for April, hoping that it can be in-person, but will plan for both options. In spite of all the uncertainties as a result of COVID-19, our membership numbers have continued on the same trajectory as years past, and we hope to see this trend continue in 2021. The healthy mining sector in NS is playing a significant part in this, and of course the tireless efforts of our Executive Director in ensuring that geoscientists practicing in NS are registered.

**Consider
Volunteering with
APGNS!
See Page 16**

President's Remarks ... continued

The Association continues to work with provincial regulators on the revision of the **Geoscience Profession Act and Geoscience Practice Regulations**. We are encouraged by the minimal edits and timely responses and hope to see these passed in 2021.

As the holidays approach, I would like to extend warmest wishes to you and your families and hope you have a relaxing and joyful Christmas and New Year!

From the Editor's Corner

The year 2020, has been a different year to say the least. It had started with so much excitement with a new decade, the 20's revival, a fresh perspective and then the most surreal event in most of our lives happened, a Global Pandemic. Where a globe that had been so intertwined together had become locked down in a matter of weeks and countries borders were closed for an undetermined period of time. The unknowns, the stresses, the "what next" questions overwhelmed our lives, our radio stations, our TV shows and even our own family units. Yes 2020, you made the world stop for a moment.



Newsletter co-editors Fiona Gallacher, P.Ge. (left), and Kelsey O'Brien, P.Ge. (right).

Despite all this, the world kept operating, albeit on a lesser scale in the office and a larger scale at home. Our homes turned into our classrooms and our office spaces while zoom calls took over in-person meetings. People adapted to seeing each other more on-screen time than in the hallways. Social behaviours even changed. No longer was there a handshake, but a wave. Masks became a new normal and we relied more on eye contact to show signs of smiles under those masks. Hand washing and sanitizer was plenty. We became a society that wanted and will hopefully always remain cleaner.

Did we mention bubbles? We have gone through a few in 2020. From a family bubble, to a neighboring family bubble, to a social bubble, to the Atlantic Bubble, and then that bubble burst. The adaptations we have endured this year have been remarkable and all while trying to keep the spread of this pandemic down.

2020 is not quite over yet. And although it has been a tumultuous year, we have a lot to be proud about. We have grown as a society to adapt to change and move forward with new ideas, bring together new perspectives and make this a 20's revival that we will never forget.

From the Editor's Corner ... continued

As your editors compile all the wonderful articles that you have submitted, we are grateful that the community of geoscientists are still strong and committed to the growth of this profession. We are hopeful that 2021 will have more contributions and maybe even a photo contest? The GeoGazette is always looking for new perspectives, a travel log, a good laugh and a good piece of work to share.

Have a safe, clean and happy holidays from all of us,

From Fiona Gallacher, P.Geo. and Kelsey O'Brien, P.Geo.

PS: We forgot about the toilet paper and flour. That will be for another post.

From the Registrar and Executive Director's Desk



Registrar and Executive Director:
David C. Carter, P.Geo., FGC.

From the Registrar's Desk ... Annual Registration Renewal

November is annual professional fees invoice month and please note that fees are due and payable on or before December 31st of the registration year. So, Registrants (Members, Licensees, Members-in-Training and Corporate Certificate of Authorization holders) will have received an invoice notice by now. As with previous years we continue our efforts to streamline our paperless operations and we will have emailed your renewal notices. If you have not received your invoice, please contact the Registrar to confirm your current email address.

Only those without a valid email address, and only if you have notified our office, will you receive a paper copy of the invoice.

Registration numbers are always difficult to predict. This year we anticipate that we may see a decrease in non-resident licensees (LTP) due to travel restrictions, however, licensees represent slightly less than 10% of our total registration.

Registration Fee Increases ...

In 2021, Members and Licensees will see an increase of approximately 6% in their professional fees. This is the first increase to professional fees since 2013 and it represents the on-going cost of operations. It is important that the professional fees and service charges shall, as far as is

From the Registrar and Executive Director's Desk ... continued

practicable, ensure that the Association has the ability to meet the mandate of the Geoscience Profession Act, specifically, to protect the public through the regulation of geoscience practice and the registration of geoscience practitioners.

Registrants should be aware that there are on-going costs associated with the updating and revision of the Geoscience Profession Act, the introduction of the Geoscience Practice Regulations, and the development of by-laws (see the update in the Executive Director's report). The next steps in that process will include government and stakeholder consultations and submission of the Act to the Legislature and the Regulations to Governor in Council, all of which will have associated legal consultation. Also, the Geoscientists Canada per member assessment fees will increase by 10% in 2021, there are on-going costs for the 3rd Party Liability Insurance program which are paid by the Association, and the increased costs associated with the assessment of applications for registration, both international and Canadian.

Survey of Professional Geoscientist Registration Fees

OGQ (Que)	\$625
APEGM (Man)	\$536
EGBC (BC)	\$498
APGNS (NS)	\$475
APEGS (Sask)	\$450
PGO (Ont)	\$420
APEGA (Alta)	\$392
NAPEG (Nun / NWT)	\$340
APEGNB (NB)	\$300
PEGNL (NL)	\$270
PEO (Ont)	\$265

APGNS members will be paying close to the average fees paid by professional geoscientists across Canada (please refer to the fees table). The average is approximately \$400.00, with a range of \$265.00 to \$625.00. APGNS is the smallest geoscience regulator in Canada and thus has a smaller member base to draw upon. An important aspect of the Association's function is to offer the equivalent level of protection to the public and service to you our members.

As noted above, it is difficult to predict the 2021 registration numbers. We have received several requests for transfer to "retired" status (it should be noted that this requires a formal declaration that the Member is not engaged in active practice). A retired Member may continue to use the restricted terms "P.Geo." and "professional geoscientist" and retain access to Association affinity programs such as life, home and vehicle insurance at preferred rates. Retired Members represent less than 10% of our total registration.

We have a number of application files (18) that are "pending" submission to the Admissions

From the Registrar and Executive Director's Desk ... continued

Board. Some are waiting for the submission of professional references; some are scheduled to write the National Professional Practice Exam. It seems that current working conditions have slowed that process and we encourage Members to respond promptly.

The current registration statics are shown in the table below:

APGNS Register as of November 23, 2020

APGNS Membership	2020 Registrants
P.Geo. Members (including life and retired Members as well as pending	202
License to Practice (non-resident in Nova Scotia)	27
MIT registrants (including pending application files)	19
Certificate of Authorization (including pending files)	49
Total Registrants	278*

*note that this is an increase of approximately 5% from 2019 registrations

National Professional Practice Exam (NPPE) ...

The National Professional Practice Exam (NPPE) is a requirement for professional registration with APGNS. It is also a requirement for transfer of registration to another jurisdiction. The exam is computer-based and is a 110-question, multiple choice exam covering six subject areas: professionalism, ethics, professional practice, law for professional practice, professional law, and regulation of members & discipline processes. Candidates have 2 ½ hours to complete the exam. The NPPE went digital in 2015, with candidates moving to computer-based testing locations in cities around the country. For candidates living in more remote locations, the first version of a “virtual remote proctor” option allowed an exam candidate to be proctored by a P.Eng. or P.Geo. in person, in conjunction with a 3rd party proctor from a computer-based testing company (Yardstick) via webcam

Despite being a vast improvement over the alternative (travelling hours by car or plane to sit an exam), virtual remote proctoring had its limitations. Candidates needed to find a suitable environment, which sometimes presented them with unfamiliar or undependable equipment. Some individuals, due to their location overseas or in remote communities, had trouble finding a registered P.Eng. or P.Geo. to proctor them. As the technology and capacity continued to improve, the in-person proctor was seen as redundant. Just as plans were being made to drop the requirement for the in-person proctor, COVID-19 struck.

With no sense of when testing centres would re-open, candidates were permitted to delay their exam to a future date or to write from home or an office location with a virtual remote proctor. There are obvious pros and cons to such an arrangement, however, experience has demonstrated that the system is working well. Access is not universal: candidates must use a laptop or desktop computer with a webcam (phones or tablets are not permitted). High-speed, stable internet is a must (Wi-Fi is OK if it's at least 10 Mbps). Candidates need access to a quiet, private space where they will be uninterrupted. So how does the virtual proctoring work? The remote proc-

From the Registrar and Executive Director's Desk ... continued

tor starts with a visual sweep of the area (desk has to be clear, no electronic devices, only one screen permitted, any others must be unplugged and turned around). The candidate's browser is locked down so they can't access anything else on their computer during the exam. The remote proctor intervenes if someone is doing something for example, whispering, looking down or off screen too often, etc. If it continues, the testing company can terminate the candidate's exam. Collusion detection analysis and other measures are employed after the fact. With all that said, as noted above, experience has indicated that the system is working well and it is anticipated that it will continue as long as restrictions are in place.

From the Executive Director's Desk ...

Geoscience Profession Act Update ...

It will not come as breaking news that the **Geoscience Profession Act** was proclaimed in 2002 and it is in need of an update. The proposed revised **Geoscience Profession Act**, along with the **Geoscience Practice Regulations**, have been reviewed by legal staff at the NS Dept of Energy and Mines with the resulting comments / questions forwarded to APGNS Governance Committee and our legal counsel for response. Those comments and explanations have been sent back to Dept of E & M and the package has been forwarded to Dept of Justice for review and comments. The Dept of E & M has also started the review and cross-referencing of the Regulations. They have consulted with and incorporated feedback from the Dept of Labour and Advanced Education, who are responsible for the **Fair Registration Practices Act**. We plan to continue the work on the Act and Regulations into the new year.

Due to the state of emergency and COVID-19 restrictions, the schedule for the NS Legislature is unknown, however, we are working toward a submission of the revised **Geoscience Profession Act** to the NS Legislature in 2021. The Regulations will follow.

2021 Invoices for Professional Fees, CPD and Communication Links ...

The 2021 Professional Fee invoices have been issued (see the Registrar's report). We continue to use a paperless system and invoices have been issued to registrant's email addresses on record in the official Register. If you have not received your 2021 invoice, please contact the Registrar and ensure that your email contact information is up to date. Remember, it is considered a professional obligation to ensure that your annual registration fees are up to date on or before Dec 31st.

CPD reporting forms have been included with the invoices. Several Members have expressed concern regarding their ability to meet the CPD requirements. Members should note that due to the restrictions imposed by the COVID-19 state of emergency, CPD requirements will be evaluated on a case-by-case basis. We note that there are a number of webinar opportunities being made available and we encourage members to take advantage of them. Several have been posted to the Association web site and we encourage you to submit information and links to those that may be acceptable for credit.

From the Registrar and Executive Director's Desk ... continued

The current lockdown has led to a plethora of on-line education, information and staying connected opportunities. We recommend that you should regularly check the Association website (www.geoscientistsns.ca) main page for up-coming events (offered by APGNS as well as others) and CPD opportunities. We also maintain a presence with information and links on Linkdin and there is always an opportunity to participate in the social media platform. Perhaps a proactive MIT or a student who might have some interest in a side project. Someone to help properly manage the social media posts and accounts and seek out fresh material. We could even assign an appropriate title that could grace a resume (i.e. social media coordinator assistant).

APGNS Office Location ...

During the state of emergency and COVID-19 restrictions, Tara (Administration Assistant) and I continue to work mostly from our home-based offices, although immediate access to files continues to be an issue. We are grateful for the patience and understanding shown by our members and applicants. I split my time between my home office and the APGNS office location in the Parker Place building on the Old Enfield Road in Enfield. We have moved into a slightly larger office on the same floor with more space and windows. Members are welcome to visit, although appointments are required.

The History of Marble Mountain Quarry- Cape Breton

Mining Association of Nova Scotia

It looks like a tropical paradise but it's actually Cape Breton's Marble Mountain! Its white sand beach and turquoise water are the result of a marble quarry that started operating there in 1869. Crushed stone was pulled into the water by waves, making the beach white.

Because marble has high pH, it keeps the water at Marble Mountain soft and clear. This lets you see the white sand underneath better, making the water look turquoise. In fact, the marble's pH offsets damage from acid rain and helps keep the entire Bras D'Or Lake healthy. Here is the history of this beautiful former quarry!



Marble Mountain, Cape Breton
Photo Credit: FX MacDonald

In 1868, Nicholas Brown of Prince Edward Island happened upon a substantial marble outcropping in the area. He acquired the mineral rights and started quarrying marble and limestone the following year.

He called the area Marble Mountain to help promote his business and was responsible for establishing the post office that officially proclaimed Marble Mountain's existence on May 1, 1871. Brown passed away in 1879 and in 1885 the site was purchased from the Sheriff of Inverness by

The History of Marble Mountain Quarry... continued

the Bras d'Or Lime and Marble Company.

In the 1800s, the marble was quarried for two purposes: 1) A grey marble extracted from the lower quarry was heated to produce white lime for the construction and agricultural industries; and 2) large blocks of white marble were extracted from the upper quarry and two adits (tunnel openings), lowered down the hill to a mill at the wharf where the stone was cut into slabs for use as building and monument stone. Sample blocks of the marble were displayed at the 1876 Centennial Exhibition in Philadelphia, the first world's fair hosted by the United States. According to an 1877 government report, they were "much admired."



Historic Marble Mountain Quarry
Photo Credit: Mining Association of Nova Scotia

The marble was said to have excellent texture and quality. "It works freely, takes a good polish, stands the weather well, and is especially adapted for monuments or ornamental work." The stone had few faults or cracks so very large, solid slabs could be cut, perfect for building. Unfortunately, the US imposed a tariff of fifty cents per cubic foot on all foreign marbles in that era so the American market was not open to Canadian producers.

About 8,000 barrels of lime were produced in 1873 and 5000 barrels in 1874, valued at \$1.00 per barrel. Twenty-four tons of marble were quarried in 1875 and sent away as samples, and about 4,100 tons of limestone were shipped to Prince Edward Island.

In 1895 the Bras D'Or Marble Company said it had "channeled eight floors, each floor containing about 4000 cubic feet of marble, or about 32,000 feet over all." Among the equipment the company had on-site was a "lowering gear, for lowering any size block of marble up to twenty tons, down the incline from quarry to mill, which is at the wharf. This incline is 1100 feet from quarry to mill, and has a fall of 284 feet. The loaded car going down brings the empty one up." During the 1895 season there were 5000 tons of limestone quarried, about 350 tons of marble shipped and 1800 barrels of lime produced. Unfortunately, the closing of the St. Peters Canal for repairs during the shipping season limited the company's progress.

The 1896 Nova Scotia Department of Mines Annual Report said 2082 tons of marble were produced that year and that "The front of a building erected in Halifax this year shows its adaptability for architectural purposes." (This was presumably a reference to the Wright Building on Barrington Street in Halifax, now called the Marble Building. It was designed for George Wright, a successful catalogue and directory publisher who died in 1912 on the Titanic.)

The Dominion Steel Company (DOSCO) purchased Marble Mountain in 1902 and for the next

The History of Marble Mountain Quarry... continued



Wright Building, NS.
Photo Credit: Mining Association of Nova Scotia

20 years it produced crushed limestone which was used as a flux in the company's Sydney steel plant. (Flux is used in the smelting process to promote fluidity and remove impurities in the form of slag.) DOSCO stopped quarrying Marble Mountain when it developed a new source of limestone in Port au Port, Newfoundland.

In the early 1900s, over one thousand people worked at Marble Mountain's quarries and the village had two churches, seven stores and a branch of the Royal Bank of Canada. It even had its own power station to provide electricity for the quarry, which meant most residents of the little community had electric lights when the rest of rural Cape Breton was still using candles and oil lamps.

After 1921, the quarry sat idle for 40 years, until it was reopened by Marble Mountain Quarries Limited in 1961. The president of the company was Lester E. Hubley who was also president of the Nova Scotia Sand and Gravel company. He acquired Marble Mountain to quarry and market the marble and crushed rock, which he did for over two decades. Hubley also started the first sand and gravel barging operation in St. Margaret's Bay and was a founding partner of Hubley Centre, the shopping area in Tantallon that bears his name.

There have occasionally been tests and small-scale extraction at Marble Mountain but no significant production since Hubley's companies stopped working there. However, it is estimated there may still be about three million tons of marble at the site.

Another landmark built with marble from Marble Mountain is the mansion on Halifax's Young Avenue often referred to as Oland Castle. It was originally built by Alexander Hobrecker who emigrated from Germany to Nova Scotia in 1874 and made his fortune as a tobacco wholesaler. By 1899, Hobrecker was also vice-president of the Bras d'Or Marble Company so he used its marble to build the mansion in 1901. (During WWI it was rumoured, but never proven, that the house was intended to be the home and headquarters of Kaiser Wilhelm II if he fled to Canada.) The Oland family bought it in 1927.



Oland Castle, NS
Photo Credit: Mining Association of Nova Scotia

Source: <http://www.facebook.com/MiningNS/posts/3781065605253878>

In the News...

The December 7, 2020 issue of the **Canadian Mining Journal** and **Environmental Science & Engineering Magazine** reported:

WSP to acquire Golder in US\$1.1B deal, creating global environmental consulting firm.

WSP, an engineering and design provider, has entered into an agreement to acquire **Golder Associates**, a global engineering and consulting firm with experience in earth science and environmental services. The transaction, based on Golder's enterprise value, is valued at US\$1.1 billion and is expected to increase WSP's share of the revenue from the environmental sector to approximately 25% of net revenue.

The acquisition is intended to position WSP's strategic Environment platform to capitalize on environmental, social and governance (ESG) trends. The transaction is expected to be completed in the second quarter of 2021.

"Together we will create the leading global environmental consulting firm with approximately 14,000 of our 54,000 professionals dedicated to accelerating the world's green transition. The combination ideally positions WSP to capitalize on the rapidly growing ESG trends driving demand for environmental services and sustainable infrastructure development," Alexandre L'Heureux, president and CEO of WSP, said in a release.

"Over the last 60 years, Golder has been on a journey where we have built one of the most successful and respected brands in the industry. Combining Golder's industry-leading expertise with WSP's impressive world-class platform and highly complementary services will provide long-term benefits for our people and help create greater value for our clients," added Hisham Mahmoud, global president and CEO of Golder.

Mississauga, Ont.-headquartered Golder is a private, employee-owned engineering and consulting firm with 60 years of experience in the geo-sciences sector; an engineering niche focused on earth and environmental conditions.

WSP provides engineering and design services to clients in the transportation and infrastructure, property and buildings, environment, power and energy, resources and industry sectors, and offers strategic advisory services.

The deal must be greenlighted by not less than 75% of Golder shareholders at a special meeting to be held on January 13, 2021. It is also subject to obtaining the final approval of the Supreme Court of Nova Scotia.

For more information, visit www.WSP.com or www.Golder.com.

Want to know what's going on with APGNS?

Check out the Events section regularly: <https://www.geoscientistsns.ca/>

Potential Geothermal Development in Western Canada

David C. Carter, P.Geo., FGC.

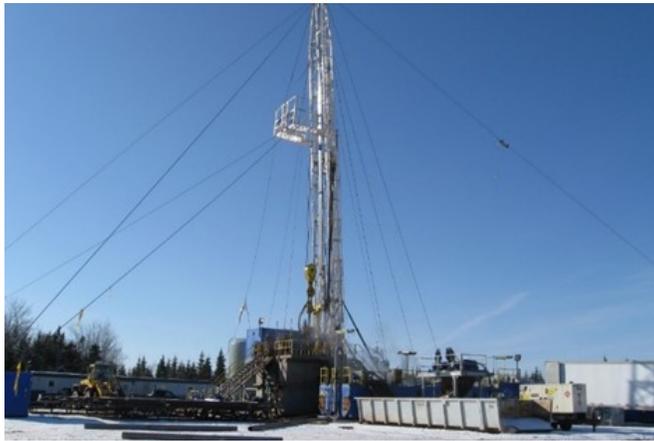


Photo Credit: David C. Carter, P.Geo., FGC.

I recently came across an interesting article in the Financial Post and then I tracked it to YouTube (search for Deep Earth Energy Project or (<https://deepcorp.ca>)) where I fell into the “rabbit hole” of great photos, videos and spectacular drone footage.

For those of you like me, with an interest in constructing deep hole, large diameter, drilling; the videos, and photos are striking. For those of you who are into drones, the shots looking up, over and down the other side of the drill showing the drilling and ancillary equipment and drilling activities are great.

For those of you with an interest in energy projects, the potential is awesome. The geology is pretty cool (or hot?) as well. I hope you enjoy the diversion from the current isolation.

The Financial Post calls it: **Saskatchewan driller hits 'gusher' with ground-breaking geothermal well that offers hope for oil workers.** The videos and associated materials lay out a project that is even larger.

The project location is in southern Saskatchewan, close to the North Dakota border, approximately 30 km southwest of Estevan, in the Williston Basin. Hot water has historically been considered an adverse operational cost for oilfield drilling operations rather than a valuable resource. So, the well was drilled into a documented high temperature saline aquifer. The drill hole in question was constructed to 3,450 metres vertical depth before turning it through 90 degrees and drilling horizontally for 2,000 metres including 212 metres of core across the reservoir. I have not quite figured out the core barrel / core tube configuration from the videos, but I am sure someone will tell me.



Photo Credit: David C. Carter, P.Geo., FGC.

Geothermal power wells have been drilled in California, much shallower and normally at a 75 degree angle, rather than being truly horizontal. This horizontal well is a first for Saskatchewan, for Canada and probably in the world. Most geothermal power projects, including those in Iceland, drill vertically into volcanic rock formations.

I am not presenting the project so much as the diversion into interesting technology, but I encourage the reader to visit the web sites for more detailed information on the project. My intent here is simply to flag it for geo-interest. The Deep Earth Energy Production Corporation (DEEP)

Potential Geothermal Development in Western Canada ... continued

is a privately held corporation, with initial support from the federal and provincial governments. DEEP's long-term goal is to develop 100s of megawatts (MW) of baseload power facilities from small, scalable, and repeatable 5-20 MW power plants, each which could power 5,000 to 20,000 households.

They have drilled and hydraulically stimulated the deepest horizontal well in Saskatchewan and the world's first 90 degree horizontal well for geothermal power production. This well may produce hot water / brine with a temperature of 127 degrees centigrade at a rate of 100 litres per second (brine production / injection rates are estimated at 68,000 m³/day). The flow rates will be limited by the hardware, such as well and tubing diameter and pump capacity. The electric submersible pump will be installed at a depth of 2,800 m. Wastewater from the power generation will still be at a temperature of 65 degrees and will be injected back into a formation above the aquifer, but the proponents suggest that it may be available for other industrial use. The well will form part of a larger 20MW geothermal power project, which is expected to commence construction in 2023.

Atlantic Geoscience Society on Track for New Edition of Popular Geology Book

The **Atlantic Geoscience Society (AGS)** is a charitable organization whose primary goal is the communication of ideas and information about the Earth and earth science to both the professional geoscience community and the general public. The membership of AGS comprises geoscience professionals from government, academia, and industry, as well as university students and other interested individuals, all dominantly from the Maritime Provinces.



Spectacular jointing in the Pabineau Falls Granite at Pabineau Falls, south of Bathurst, New Brunswick. This rock has been dated to around 400 Ma (Early Devonian).
Photo credit: LBY2 Committee

Since its birth in 1972, AGS has undertaken a range of special projects directed towards increasing public awareness of earth science and providing information on the geology and mineral deposits of the Maritime Provinces to the general public. These projects include geological highway maps of Nova Scotia and New Brunswick, field guides to sites of geological interest, a series of videos on the geology and mineral resources of the Maritime Provinces, and brochures and other resources for public school teachers; AGS even sponsors a photographic competition within the Photographic Guild of Nova Scotia each year for the photographs having a geological theme. This represents an impressive

Popular Geology Book ... continued



Tightly folded, interbedded quartzite and siltstone of the Upper Cambrian to Lower Ordovician Baskahegan Lake Formation, exposed on the Trans-Canada Highway south of Woodstock, NB. These rocks are part of the Miramichi belt, which comprises the oldest rocks to be found in central and northern New Brunswick.
Photo credit: *LBY2* Committee

range of accomplishments for a relatively small, entirely volunteer association, and speaks to the AGS membership's level of commitment to earth science education.

Perhaps the most important project undertaken by AGS has been the publication in 2001 of the first edition of *The Last Billion Years: A Geological History of the Maritime Provinces of Canada (LBY)*. The first print run sold out within weeks, and now more than 10,000 copies are in print and the *LBY* is officially a Canadian bestseller—no mean feat for a regional geology book. To underscore its success, *LBY* was widely acclaimed.

For example, *The Globe and Mail* fea-

tured it as one of the 10 science books to read for the summer of 2001 and cited its “Hundreds of gorgeous photographs, paintings and diagrams, to go with its breezy, informative text.” Almost 20 years later, it is time to develop a second edition of the book (*LBY2*) that is scientifically updated, but retains the level, appeal and accessibility of the original.

The first edition of *LBY* was successful in promoting a greater understanding among the interested public of the geology of Canada's Maritime Provinces. Anecdotally, we received reports that the book worked for individuals at various levels of knowledge, and the attractive imagery in the book seems to have been a significant factor in this achievement. *LBY* was aimed at the interested general public but was also well received by other audience types. Although not intended to be a textbook, *LBY* was used as a basis, a text or a recommended text in a number of geoscience courses in the region, for example at Saint Mary's and Acadia universities. Feedback from colleagues also shows that it was an effective “in-reach” tool; as professional geoscientists we are often highly specialized, and “popular”



Vertically tilted Lower Silurian volcanic ash layers of the White Rock Formation, Cape Forchu, near Yarmouth, Nova Scotia.
Photo credit: *LBY2* Committee

Popular Geology Book ... continued

books can be very helpful in broadening our horizons and in enabling us to better explain our science to the public. *LBY* also helped promote (geo)tourism in the Maritimes, drawing attention to particular sites and aspects that visitors might otherwise miss. Obviously, we have similar visions for *LBY2*.

The *LBY2* project is being carried out under the auspices of the AGS Education Committee (*LBY2* Sub-committee). As with *LBY*, the publisher Nimbus has agreed to co-publish *LBY2* with AGS. Our goal is for *LBY2* to be available in early 2022 in celebration of the 50th anniversary of AGS and in time for the Geological Association of Canada–Mineralogical Association of Canada meeting in Halifax that spring. Work on *LBY2* has now been in progress for two years. As with *LBY*, the content will consist of chapters and “boxes” written and edited into a coherent narrative: chapters 1–3 will intro-

duce general aspects of geology, with a Maritimes slant; five of the remaining chapters will describe the geological history of the Maritimes during particular time intervals, from the Proterozoic to the Quaternary. There will be one chapter on resources (mining and energy), and a new chapter will be devoted to geologically related environmental and societal issues, including climate and hazards. Numerous related topics are addressed in the “boxes”, which can be thought of as mini-chapters between the main chapters.

Many prominent geoscientists in Nova Scotia and New Brunswick have been working on the updates and revisions, and most initial revised drafts are in progress or completed; these will soon be forwarded to professional and target-audience readers for formal and informal reviews.

Although an online version of *LBY2* is not planned for at least the near future, the possibility of an e-pdf has been discussed with Nimbus, and we are making sure that this is a viable option when negotiating copyright agreements. Spin-offs will include online teacher resources, e.g., figures, photos, etc. The kind of online resources to be available will be like those prepared for *Four Billion Years And Counting*, a similar but more ambitious book that encompassed the whole country (see <https://www.cgenarchive.org/fby-sample-lesson.html>). Members of the *LBY2* Committee were also integral to that project after the first edition of *LBY* was completed. The *LBY2* committee has been raising funds to subsidize the retail price of *LBY2* in order to make it more readily accessible to the public. For example, in addition to funding from the Canadian Geologi-



Granitic dykes at Green Cove, a beautifully geologically complex locality off the Cabot Trail in Cape Breton Highlands National Park, with Cape Smokey in the distance. A Nova Scotia Geoheritage Site, Green Cove is periodically threatened by the erection of a huge statue.

Photo credit: *LBY2* Committee

Popular Geology Book ... continued



Metamorphosed fine-grained clastics of the Lower Ordovician Feltzen Formation at Blue Rocks, near Lunenburg, Nova Scotia. These rocks are an excellent example of sedimentary rocks transitioning to metamorphic rocks.

Photo credit: LBY2 Committee

cal Foundation and the Association of Professional Engineers and Geoscientists of New Brunswick, a generous donation has been received from APGNS (Association of Professional Geoscientists of Nova Scotia).

As part of the preparation for LBY2, new photographic imagery has been sought, and we include some images that may be included in the book with this article.

Submitted on behalf of the LBY2 Committee (Sandra Barr, Jennifer Bates, Rob Fensome, Graham Williams,

and Reg Wilson) by RW and RF.

The AGS holds executive meetings and an annual colloquium in late January or early February, rotating among several centres in Nova Scotia and New Brunswick. The colloquium serves as a venue for AGS members, including many graduate and undergraduate students, to present the results of their current research, and may also include invited speakers from outside the Atlantic Provinces. AGS also publishes a professional journal, *Atlantic Geology*, whose subscribers include members and non-members, as well as university and government libraries. AGS is affiliated with the **Geological Association of Canada (GAC)**, the **Canadian Society of Petroleum Geologists (CSPG)** and the **American Association of Petroleum Geologists (AAPG)**. AGS is a member society of the **Canadian Federation of Earth Sciences (CFES)**.

Geoscientists NS is on social media!

Stay up to date with Geoscientists NS news and events; learn about the benefits available for members; job postings; educational material; professional development; involvement in the community; and more.

Follow us on **LinkedIn** <https://www.linkedin.com/company/geoscientists-nova-scotia/>

or

Follow us on **Twitter** @GeoscientistsNS (<https://twitter.com/GeoscientistsNS>)

Call for Nominations 2021 – 2022 APGNS Council

APGNS encourages all of our members to consider becoming involved in helping to guide the affairs of the Association by volunteering to serve on Council.

The APGNS Nominating Committee will be led by past-President, Gavin Isenor, P.Geo., FGC. The Nomination Form is available upon request. Nominees should be aware of the commitment of professional time that is required for service on Council. Bi-Monthly meetings are scheduled for a weekday afternoon, they are normally 2 hours in duration, and members should anticipate approximately 2 hours preparation time to review materials etc., and approximately 2 hours for follow-up.

The Nominating Committee will prepare a list of nominees to be submitted at the January 2021 meeting of Council. This list will include not more than two (2) names for President, no more than two (2) names for Vice-President, and not less than three (3) and not more than six (6) names for Councilor positions. Nominees for President and for Vice-President are required to have had prior experience on Council, at least one (1) term and nominees for Councilor must have been a member for at least one (1) year. Currently serving members of Council cannot be elected to the same office in the following year.

Any three (3) members in good standing of the Association (one to nominate and two to support) can submit a nomination for any of the positions to the Nominating Committee. This must be done in writing and on the prescribed form (see attached). The form also includes statement of consent from the nominee and it must be signed and stamped (if possible). Nomination forms may be requested from the Registrar at the address below.

On receipt of the Committee report, and if required, Council will instruct the Registrar to issue an electronic ballot to each member of the Association in January 2021. The ballot will close on February 15th and the results of the ballot will be announced at the Annual General Meeting in April 2021.

If you are interested in serving on Council, please contact the Nomination Committee Chair or the Registrar at the address below before January 8, 2021, so that we can compile the required nomination materials and submit your nomination to the Nominating Committee and Council for consideration.

If you have questions please feel free to contact the undersigned.

Sincerely,

David C. Carter, P.Geo., FGC.
Executive Director & Registrar
Association of Professional Geoscientists of Nova Scotia
phone: (902) 420-9928
web: www.geoscientistsns.ca

Geoscientists Nova Scotia Operations During the COVID-19 State of Emergency ...

Dear registrants, applicants, members, licensees, members-in-training, family and friends,

During the COVID-19 pandemic, APGNS is committed to preventing the spread of the virus and to safeguarding the health of the public, applicants, members and staff.

As a result, the following steps have been implemented and will continue as long as required:

- The APGNS office remains closed to all visitors (registrants, volunteers, and members of the public) as per the NS State of Emergency protocols.
- APGNS staff members continue to work remotely from home-based offices, however, in some cases it has been necessary for staff to return to the office briefly to deal with various files and paperwork requirements. We will do our best to ensure we provide professional, timely service during this closure. Walk-in appointments will not be possible at this time.
- APGNS has cancelled or postponed all in-person events and meetings and will not be organizing or presenting in-person events in the foreseeable future. Events and meetings are being delivered virtually through the GoToMeeting software platform or by other means.
- Information regarding events will be provided directly to registrants through the Association website (www.geoscientistsns.ca) or directly from the Registrar (registrar@geoscientistsns.ca or 902-420-9928).
- Regardless of whether staff members are working remotely or at the office, they are responding to email and telephone messages and attempting to maintain operations as well as possible under the pandemic circumstances.

Please be aware that we anticipate that there will continue to be delays in responding to inquiries and processing application and other requests. We apologize for the inconvenience and delays during this difficult time and we are grateful for your understanding and patience.

For inquiries, please use the following APGNS Contact information:

Mail: P.O. Box 91, Main Station, Enfield, N.S. B2T 1C6

Email: info@geoscientistsns.ca

Telephone: 902-420-9928

Geoscientists Nova Scotia's highest priority is our legislated mandate to safeguard the public as well as applicants, registrants, and staff. We ask that all Nova Scotia Geoscientists be aware of and adhere to the government regulations and recommended best practices, including self-isolation, wearing of appropriate masks, and personal social distancing in order to prevent community transmission of the COVID-19 virus.

Please stay home if possible, limit your contact with others, wear your mask and stay safe.

Geoscientists Nova Scotia
P.O. Box 91
Enfield, Nova Scotia
B2T 1C6

Office: 902.420.9928
www.geoscientistsns.ca

Executive Director and Registrar
David Carter, P.Geo., FGC.
exec.director@geoscientistsns.ca
registrar@geoscientistsns.ca

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President
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Newsletter Advertising

Geoscientists Nova Scotia is now accepting newsletter advertising as full, 1/2 or 1/4 page camera ready inserts. All submitted advertising is subject to approval as per the AGNS Communications Policy.

For more information, or to submit camera ready layout material please contact David Carter, P.Geo., FGC - exec.director@geoscientistsns.ca

Location / Layout	Standard non-member rate per issue*	Standard member rate per issue*
Full Page	\$600.00	\$550.00
1/2 page	\$400.00	\$350.00
1/4 page	\$250.00	\$200.00

* full year subscriptions will receive a 10% discount

The **GeoGazette** is a quarterly publication of Geoscientists Nova Scotia.

Members are welcome and encouraged to submit editorials, letters to the editor and articles of interest, including photographs, for publication.

Opinions and views independently expressed in this publication do not necessarily reflect those of Geoscientists Nova Scotia, the Council, Boards, Committees, and/or Staff.

Subscriptions to the **GeoGazette** are provided electronically to all registrants (members, licensees and members-in training, and student members) in good standing, and are included in the annual registration fees.

The **GeoGazette** will be distributed electronically and posted on the Association website (www.geoscientistsns.ca).

The entire contents of the **GeoGazette** are copyright by the Association of Professional Geoscientists of Nova Scotia. Original material may be reprinted with permission.

APGNS Publication Policy

APGNS encourages the submission of articles and editorials for publication in the **GeoGazette** on topics related to the science and profession of geoscience.

Submittals shall be of interest to the members of APGNS, and others interested in earth science. Articles and editorials may be noted as follows at the discretion of the editor:

"The opinions, positions and conclusions presented herein are those of the author and do not necessarily reflect the opinions, positions or conclusions of APGNS."

All materials submitted for publication, including author opinions contained therein, shall include accurate and appropriate references. The Editor has the authority to solicit, edit, accept, or reject articles and editorials and other written material for publication. The APGNS Editorial Board has the authority, if it chooses to act on any particular case, to support or overrule actions of the Editor regarding the solicitation, editing, acceptance, or rejection of any particular article, editorial, or other written material for publication.