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Catrina Russell-Dolan, Vice-President
Atlantic Geoscience Society
New Brunswick Museum
Saint John, NB E2K 1E5
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Dear Members of the AGS Awards Committee:

Nomination of Susan C. Johnson for the AGS Gesner Medal

It is my great pleasure to nominate Susan (Sue) Johnson for the Atlantic Geoscience Society Distinguished Science Award (Gesner Medal). As stated in the terms of reference, this award “is made to a person who has, through their own efforts (maps, publications, memoirs, etc.) developed and promoted the advancement of geoscience in the Atlantic Region in any field of geology and whose contribution has made an impact beyond the immediate Atlantic region”. Sue’s work over her 40-year career meets all these criteria.

Sue did her undergraduate degree in geology at Acadia University (1977-1981). She worked as a Geological Assistant for Billiton Canada Ltd at the Mount Pleasant Tungsten Mine in southwestern New Brunswick and then in 1986 began her career with the New Brunswick Department of Energy and Resource Development (and its predecessors) in the Geological Surveys Branch in Sussex. Initially her work involved compilation of metallic mineral occurrence data for the N.B. metallogenic map and New Brunswick's first computerized mineral occurrence database but beginning in 1990 she undertook bedrock geological mapping, map compilation and correlation, and research in a variety of Neoproterozoic and Lower Paleozoic rocks. From 1994-1997, she conducted bedrock mapping in the Carboniferous sedimentary basin of southern New Brunswick under the Geological Survey of Canada's NATMAP Magdalen Basin Project, and in 1998 was a co-author of the 1998 Magdalen Basin NATMAP onshore geological database published by the Geological Survey of Canada. Her important work in the Carboniferous rocks of southern New Brunswick led ultimately to a 348-page NBDNR Memoir, co-authored with Clint St. Peter in 2009.

As a provincial government geologist, much of Sue’s work has been reported in government publications, including maps, current research articles, and oral and poster presentations at the annual New Brunswick Energy, Mines, and Petroleum conference and its predecessors. In that role she has authored and co-authored 37 geological maps, the first two in 1995 on the Carboniferous geology of the Cape Tormentine (Plate 95-8) and Port Elgin (Plate 95-9) areas. She is also co-author of an additional 20 bedrock geology compilation maps of southern New Brunswick, including most notably the seminal 1994 compilation maps of southwestern and southeastern New Brunswick co-authored with McLeod and Ruitenberg. In addition, she has

published 33 current research articles and internal reports on her work, many as first or sole author. For the past ten years she has been mapping in the Caledonian Highlands, updating the existing maps by taking advantage of new access roads, especially those related to the construction of the Fundy Trail. She is currently assembling those results on a revised geological map of the Caledonian Highlands to be published in the coming year.

But Sue is not only a geological mapper – she also has 16 publications in refereed journals and books, the first in 1990 and the most recent in 2024. Her most significant mapping was arguably that done in the New River-Long Reach-Annidale area which led to the recognition of the Annidale belt as a remnant of the Penobscot arc system of the northeastern Appalachians (Johnson et al. 2012). Sue and her co-authors demonstrated that these Early Cambrian to early Tremadocian rocks are part of an ensialic to ensimatic arc-back-arc complex that developed along the margin of the peri-Gondwanan microcontinent Ganderia. This widely cited work had implications throughout the orogen and was a major component of tectonic models developed by Geological Survey of Canada geologist Cees van Staal, a previous Gesner Medal winner. Her work in the New River belt (e.g., Johnson and McLeod 1996; Johnson 2001) led to the recognition of the importance of this enigmatic belt in resolving Ganderian and Avalonian relationships in southern New Brunswick. Most recently she published an important paper documenting new fossil discoveries in Grand Manan Island (Johnson et al. 2024).

Over the years she has shared her work through 65 conference presentations, including the Atlantic Geoscience Society annual colloquium but also more broadly at meetings of the Northeastern Section of the Geological Society of America and Geological Association of Canada. She annually shares her knowledge of New Brunswick geology with explorationists at the Prospectors and Developers Association of Canada conference in Toronto and the Roundup in Vancouver.

She has also shared her field expertise by authoring and co-authoring nine published field trip guides, as well as several informal guides for visiting colleagues and collaborators. In the past four years she has been an active participant in a large international project, IGCP 683, on “Geological comparisons and correlations among crustal blocks of eastern North America, northwestern Africa and western Europe”. In this context she participated in IGCP 683 field trips in Nova Scotia (May 2022), Spain (May 2023), and Morocco (October 2024). She contributed a virtual field trip guide (Johnson and Park 2022) on the Caledonian Highlands, Avalonia in Southern New Brunswick, IGCP 683 Virtual Field Guide N°2 (https://igcp683.org/wp-content/uploads/2022/04/Johnson_Park-final.pdf).

In addition to her scientific work, Sue has been an active participant in geoscience activities in Atlantic Canada and beyond. She served as president on the Atlantic Geoscience Society in 1995-96 and has organized or co-organized at least eight AGS annual colloquia, the first in 1996 and the most recent in 2024. She received the AGS Laing Ferguson Distinguished Service Award in 2007. She is also a member of the Geological Association of Canada, Canadian Institute of Mining and Metallurgy, the Association of Professional Engineers and Geoscientists of New Brunswick, and the Prospectors and Developers Association of Canada.

On a personal note, I have long counted on Sue to provide astute field observations and ask penetrating questions about my own geological interpretations. Our many discussions about the pros and cons of various models and interpretations have been invaluable.

In summary, Sue Johnson is widely recognised among Appalachian geologists as a leading authority on southern NB geology, and she has shared that knowledge broadly throughout eastern North America and correlative areas now on the other side of the Atlantic Ocean. For the above reasons, I am pleased to nominate her for the Distinguished Scientist Award (Gesner Medal) of the Atlantic Geoscience Society.

Sincerely,

A handwritten signature in cursive script that reads "Sandra M. Barr".

Sandra M. Barr
Professor Emerita
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c. K. Thorne (Secunder of the Nomination)

L. Fyffe
Y. Kuiper
M. McLeod
M. Parkhill
C. van Staal
C. White