

Geological Fieldwork 2018

A Summary of Field Activities and Current Research



Ministry of
Energy, Mines and
Petroleum Resources



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British Columbia Geological Survey
Paper 2019-01

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Front Cover: Gently dipping dark grey to maroon interstratified lava flows, tuff, lapilli-tuff, lapillistone, and volcanic breccia likely correlative with the Horn Mountain Formation (late Early-Middle Jurassic, foreground) unconformably overlies the Nightout pluton (Late Triassic, background). View to the northwest from Mount Walter, near Yehiniko Lake.

See van Straaten, B.I., and Wearmouth, C., 2019. Geology of the Latham and Pallen Creek area, northwestern British Columbia: Distinguishing the Tsaybahe group, Stuhini Group, and Hazelton Group, and the onset of Triassic arc volcanism in northern Stikinia, this volume. **Photo by Bram van Straaten.**

Back Cover: Northern Hogem batholith area, looking east. Bedrock exposures are diorite to monzodiorite of the Thane Creek suite. Mountains, valleys, and tarn are unnamed.

See Ootes, L., Bergen, A., Milidragovic, D., Graham, B., and Simmonds, R., 2019. Preliminary geology of northern Hogem batholith, Quesnel terrane, north-central British Columbia, this volume. **Photo by Reid Simmonds.**

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Preface

Geological Fieldwork 2018

This, the 44th edition of **Geological Fieldwork**, is a volume of peer-reviewed papers that presents the results of geoscience research conducted by the **British Columbia Geological Survey (BCGS)** and its partners. This volume is one of three that the Survey publishes each January and is accompanied by the **Provincial Overview of Exploration and Mining in British Columbia** and the **Coal Industry Overview**. In addition to these annual publications, the Survey regularly releases Open Files, GeoFiles, Geoscience Maps, Papers, and databases, all of which are freely accessed through the recently updated BCGS website and through MapPlace, our database-driven geospatial web service.

The papers in Geological Fieldwork 2018 address a variety of geological inquiries, highlighting both regional mapping and more thematic studies. Schiarizza's contribution is the latest in a series that examines the geological architecture of the Nicola Group (Triassic) in central British Columbia. From work in the north-central part of the province, Ootes et al. present the initial results from the first year of a four-year mapping program that addresses the geological evolution of the Hogem batholith and related mineral deposits, and Milidragovic and Grundy consider the geochemistry and petrology of the Trembleur ultramafite, host to the Decar nickel-iron awaruite deposit. In northwest British Columbia, van Straaten and Wearmouth continued recent Survey mapping of volcano-sedimentary successions and related intrusions of northern Stikinia near Dease Lake, and Mihalyuk et al. present geochronological data from the Granduc and Rock and Roll volcanogenic massive sulphide (VMS) deposits. Simandl et al. describe the occurrence of fersmite, a mineral rich in niobium, thorium, and rare earth elements, at the Mount Brussiloff magnesite deposit in the southeastern part of the province. The final paper in the volume, by Han et al., details the data model used at the BCGS to streamline data set handling, from compilation to product generation.

Conferences are another way that the Survey distributes the results of ongoing studies. In 2018, BCGS contributed technical presentations at annual regional meetings such as Rock Talks (Smithers), Kamloops Exploration Group (KEG; Kamloops), Minerals South (Trail) and the American Exploration and Mining Association (Spokane). The Survey continues to contribute to the technical program of the Association of Mineral Exploration's (AME) Roundup (Vancouver), organizing two technical sessions and providing technical content through presentations and posters. The Survey coordinates the Ministry presence at both Roundup and the Prospectors and Developers Association of Canada (Toronto) meetings. Unique in 2018, the BCGS was a technical partner in the Resources for Future Generations 2018 (RFG 2018), and interim International Union of Geological Sciences (IUGS) convention held in Vancouver in June. RFG was a joint meeting of IUGS, the Canadian Federation of Earth Sciences (CFES), the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), the Geological Association of Canada (GAC) and the Mineralogical Association of Canada (MAC). A number of staff were on the organizing committee, presented talks, or ran field trips. BCGS also hosted its annual Open House in Victoria in November.

The Survey continues to invest in streamlining digital data collection in the field and integration into provincial datasets. The BCGS has adopted an in-house digital database that works with inexpensive software on low-cost generic tablets, enabling geologists to digitally capture data in the field while using other datasets such as geophysics and satellite imagery. Also developed in-house, the BCGS data framework model enables maps to be more efficiently integrated into the provincial geology as well as meet internationally accepted data standards.

In the last few years, the Survey has seen significant renewal by filling several vacancies. In February, former Chief Geologist and Executive Director Dr. Stephen Rowins left BCGS and assumed the role of director and professor at the Centre for Exploration Targeting at University of Western Australia. Dr. Adrian Hickin, former Director of the Cordilleran Geoscience Section, was selected as Steve's replacement and has been appointed Chief Geologist.



Adrian S. Hickin
Chief Geologist and Executive Director
British Columbia Geological Survey

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