ranges from about 56% to 74% and reveal trends consistent with crystal fractionation of plagioclase and mafic minerals. The petrographic and chemical characteristics are similar to those of I-type granitoid suites formed in subduction zone settings at active continental margins.

Petrology of the Indian Lake pluton, Antigonish Highlands, Nova Scotia

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The Indian Lake pluton in the Antigonish Highlands of northern mainland Nova Scotia is not reliably dated but is interpreted to have formed at about 605 Ma like some other plutons in the Avalonian Antigonish Highlands. The purpose of this study is to describe the petrography and geochemistry of the Indian Lake pluton, and based on those data, to investigate whether or not it is likely to have been comagmatic with those other dated suites. The Indian Lake pluton will also be compared to the undated Leadbetter Road pluton, from which it is separated by the West Barneys River plutonic suite, a large composite pluton of Ordovician age (ca. 470 Ma). It is unclear whether the Leadbetter Road pluton is part of the West Barneys River suite or not, and this study will contribute to resolving that question. The Indian Lake pluton consists of medium-grained granodiorite gradational to monzogranite and medium-grained quartz diorite and diorite. Both the granodiorite/monzogranite and quartz diorite/diorite contain abundant dioritic inclusions. In contrast, the Leadbetter Road pluton consists of coarse-grained alkali-feldspar granite and is similar to syenogranitic parts of some ca. 605 Ma plutons elsewhere in the Antigonish Highlands. Preliminary chemical data from the Indian Lake pluton show that SiO_2 content

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