

The Devono-Carboniferous and Carboniferous Plutons of the Eastern Cobequid Highlands

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The Folly Lake and Economy River plutons of probable Devono-Carboniferous age are complexes of mostly early fine- to coarse-grained gabbro intruded by porphyritic and equigranular diorite. The Folly Lake pluton is intruded by the Hart Lake-Byers Lake pluton. The latter pluton together with Pleasant Hills pluton are the youngest plutons in the eastern Cobequid Hills, previously radiometrically dated as Early Carboniferous. These plutons are principally granites, they have chilled margins hundreds of metres thick consisting of porphyritic and/or equigranular granophyric granite and are cut by late pegmatitic veins, many of which are mineralized with magnetite, chalcopyrite, pyrite, tourmaline and siderite.

The Folly Lake and Economy River plutons consist of gabbro, diorite and granodiorite. The gabbros have a subophitic texture produced by large crystals of augite and prismatic feldspars. They also contain hornblende, biotite, actinolite, sphene, opaques, apatite, zircon and penninite. The diorites are porphy-

ritic and equigranular. They consist of plagioclase, hornblende, opaques, minor amounts of quartz, alkali feldspar, apatite, epidote, zircon and sphene. The granodiorites resemble the diorites and their distinction is made on the basis of the ratio of plagioclase to quartz and alkali-feldspar.

The main phase in the Pleasant Hills pluton is a porphyritic granite with a microcrystalline, generally granophyric, groundmass and phenocrysts of perthite, quartz, plagioclase and biotite. The main phases in the Hart Lake-Byers Lake pluton are: (1) a fine- to medium-grained pink granite with a granitic or graphic texture, consisting of alkali feldspars, quartz, plagioclase, biotite, hornblende and rare riebeckite; and (2) a coarse-grained, leucocratic, pink granite with < 5% ferromagnesian minerals. Modally, these granites fall in the "granite" and "alkali feldspar granite" fields of the IUGS classification. Their differences in textures and mineralogy reflect differences in their local crystallisation and subsolidus histories.