POSTER SESSION

The Cape Breton Granitoid Pluton Project: a progress report

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In 1978, a study of granitoid plutons in Cape Breton Island was initiated in cooperation with the Nova Scotia Department of Mines and Energy. This project involves detailed mapping of the plutons, followed by petrographic studies, age dating, major and trace element analyses, and assessment of economic potential. To date, plutonic rocks have been investigated in thirteen areas (Gillis Mountain, Deep Cove, Petit de Grat, Loch Lomond, Huntington Mountain, Boisdale Hills, Creignish Hills, Kellys Mountain, St. Anns Mountain, Cape Smoky, White Point, Cheticamp, and Whycocomagh Mountain). Four of these have been the subject of M.Sc. or B.Sc. (Honours) thesis projects completed or in progress at Acadia University. Plutonic rocks in the Mabou Highlands will be mapped in 1982.

These studies have shown that: (1) the plutons fall into two main age groups, Late Hadrynian-Cambrian and Devono-Carboniferous, although a few may be Ordovician-Silurian; (2) most, but not all, plutons are composite, ranging from diorite to leucogranite or alaskite; (3) in chemistry, the plutons are calc-alkalic and generally display typical calc-alkali differentiation trends; (4) they have affinities with "I-Type" and "magnetite-series" granitoid rocks; (5) their petrographic and chemical features suggest potential for Cu-Mo-W mineralization of porphyry or skarn type, consistent with known mineral occurrences in Cape Breton Island.

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