

**Geochemical Characterization of Rocks Comprising the
Goldenville-Halifax Transition (GHT) of the Meguma Group.
Southern Nova Scotia.***

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The transition between the sandy Goldenville and shaly Halifax Formations of the Cambro-Ordovician Meguma Group of Nova Scotia is a control for metallic mineral concentration. The stratigraphic interval straddling the Goldenville-Halifax transition (GHT) hosts a disproportionate number of the mineral occurrences (e.g. Au, W, As, Sb, Pb, Zn, Mn) in the non-igneous portion of the Meguma Terrane.

This project attempts to understand the physical and chemical processes that have led to this enrichment. In order to characterize the rocks of the GHT in terms of litho-geochemistry, over 400 samples were collected with good stratigraphic control from units above, within and below what has been referred to as the Goldenville-Halifax contact by different workers in localities stretching from Guysborough to

Yarmouth Counties.

Geochemical analyses show enrichment of Pb, Cu, Zn, Ba, and Au in a finely laminated, manganiferous, locally calcareous unit in the upper part of the Goldenville Formation. Similar rocks, often referred to as spessartine quartzites (coticles) occur within the GHT throughout southern mainland Nova Scotia and are locally associated with known metallic prospects. Besides its metallogenic purpose, this project provides baseline data for regional geochemical exploration and for water quality studies within the Meguma terrane.

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