

train highly qualified personnel for base metal exploration. It was determined that research was to be focused in four regional projects (Appalachians, Abitibi, Flynn Flon and Southeastern BC) and one thematic one aimed at finding hidden deposits (Deep Search).

For the TGI 3 Appalachians Project research is being focused on upgrading the geoscience knowledge base in central Newfoundland (primarily the Buchans - Robert's Arm belt, Victoria Lake Supergroup and Baie Verte Peninsula) and the Bathurst Mining Camp, New Brunswick. The Bathurst Mining Camp (BMC) and Central Mobile Belt, Newfoundland, represent two of Canada's most important base metal regions. However the potential of discovering new major deposits is hampered by the geological complexity and lack of surface expression. Basic geological studies, combined with the application of new techniques and technologies, are key to increasing exploration and discovery rates. The bedrock geology of the BMC is well constrained at surface, but poorly understood at depth. Improved understanding of the 3D geological structure will enhance the ability to vector in on mineralised horizons, even in hitherto unprospective areas, e.g., beneath Carboniferous cover. New strategic geophysical surveys, combined with extensive existing data will allow us to model the regional 3D structure of the BMC and better project the surface geology to depth. In the Central Mobile Belt of Newfoundland, detailed geological knowledge of the local and regional structure, stratigraphy and tectonic setting is vital for base metal exploration. The Buchans - Robert's Arm belt is host to a number base metal past producers and a major area of current exploration, and yet remains largely geologically undefined beyond the immediate vicinity of the mines. Strategic geochemistry, geochronology and geophysics, in combination with detailed bedrock mapping will enable extrapolation from the well constrained mine sequences and thus provide a focus for future exploration. Similar methods are also being applied in the Baie Verte Peninsula that hosts the past-producing Rambler Mine. In the highly prospective Victoria Lake Supergroup bedrock geology was recently mapped by the Red Indian Line TGI project. However, extensive till cover hampers base metal exploration and requires the addition of surficial mapping/geochemistry.

TGI 3 Appalachians: an overview

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The third phase of the Targeted Geoscience Initiative (TGI 3) was instigated in 2005 by the Government of Canada who committed \$25M over five years to support geological mapping of base metal reserves in established mining communities. By improving the geoscience knowledgebase in targeted mining districts, some of the inherent risk in exploration and development associated with the extension of known reserves at existing mining operations and the search for new, deeply buried deposits will be mitigated. This will be achieved through focussed mapping and geophysical surveys, developing new exploration methodologies for buried deposits and helping