

Geoscience BC Announces QUEST: New Regional Geoscience Surveys in Central BC this Summer and Fall

Geoscience BC (GBC) is pleased to announce the QUEST Project, a program of regional geophysical and geochemical surveys this summer in central BC. The surveys will focus on the central part of the Quesnel Terrane, a belt of rocks that extends from Kamloops to past Mackenzie and runs beneath Prince George and Quesnel. These rocks have potential for copper and copper-gold deposits such as those at the Gibraltar and Mount Polley mines. The central part of this belt (around Prince George) has been relatively unexplored as it is covered by a thick layer of sand and gravel left behind by glaciers, making mineral exploration difficult.

The project area covers a portion of the Mountain Pine Beetle infestation, which has affected a huge area of BC, creating an enormous economic challenge for British Columbia and its affected communities. This project is part of Geoscience BC's initiative to generate new economic diversification opportunities for communities in the Mountain Pine Beetle affected areas. This is part of the Mountain Pine Beetle Collaborative Geoscience Plan developed by Geoscience BC, BC Ministry of Energy Mines and Petroleum Resources and Natural Resources Canada for geoscience initiatives in the Mountain Pine Beetle area. Mineral exploration and mining generate over \$8 billion in gross revenues for the BC economy – the discovery, development, and mining of a large deposit in the Quesnel Terrane would benefit communities throughout central BC.

Project Details

Two new airborne geophysical surveys will be flown as part of this project: an electromagnetic survey and an airborne gravity survey.



PHOTO 3. Sampling of lake sediment for geochemical analysis. *Photo by W. Jackaman.*



PHOTO 1. Helicopter flying airborne electromagnetic survey. The electromagnetic survey equipment is suspended beneath the helicopter. *Photo courtesy of Geotech Ltd.*



PHOTO 2. Airplane flying an airborne gravity survey. All survey equipment is contained within the airplane. *Photo courtesy of Sander Geophysics Ltd.*

Geophysics is essentially remote sensing of the properties of rocks in the ground, in this case being the conductivity and density of the rocks respectively. The electromagnetic survey will be flown by helicopter, with the survey equipment, which looks like a giant spiderweb, pulled behind the helicopter so that it flies just above the treetops (see Photo 1). The helicopter will operate out of airports, roads, and open areas where it can land for re-fueling. The airborne gravity survey will be flown by a small plane, with the survey equipment contained inside (see Photo 2). The airplane will operate out of local airports.

The results of these geophysical surveys will help industry identify mineral exploration target areas underneath the sand and gravel cover. The geophysical survey area is outlined in black on the map.



This project will also include the re-analysis of over 5,000 archived regional geochemical survey samples, and the collection of 2200 new geochemical samples in an area north and west of Prince George. Geochemistry involves the sampling of sediment from lakes and streams, looking for unusual concentrations of elements of interest such as copper or gold. Sampling crews will work from trucks and helicopter (see Photo 3). This new geochemical data will identify new potential mineral exploration targets, and help attract the exploration industry to the region.

Geoscience BC is very pleased to welcome the Northern Development Initiative Trust as our funding partner in this project. Their funding will allow an extension of the geophysical survey area to the north, and expansion of the geochemical survey area to the north and east around Mackenzie, BC.

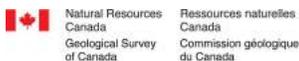
Altogether, this program will produce a compilation of maps combining the results of the above surveys with existing public geoscience data. All data will be released to the public in digital format, and key maps will also be printed. The data release is planned for early 2008.

For more information on the Northern Development Initiative Trust, please contact:



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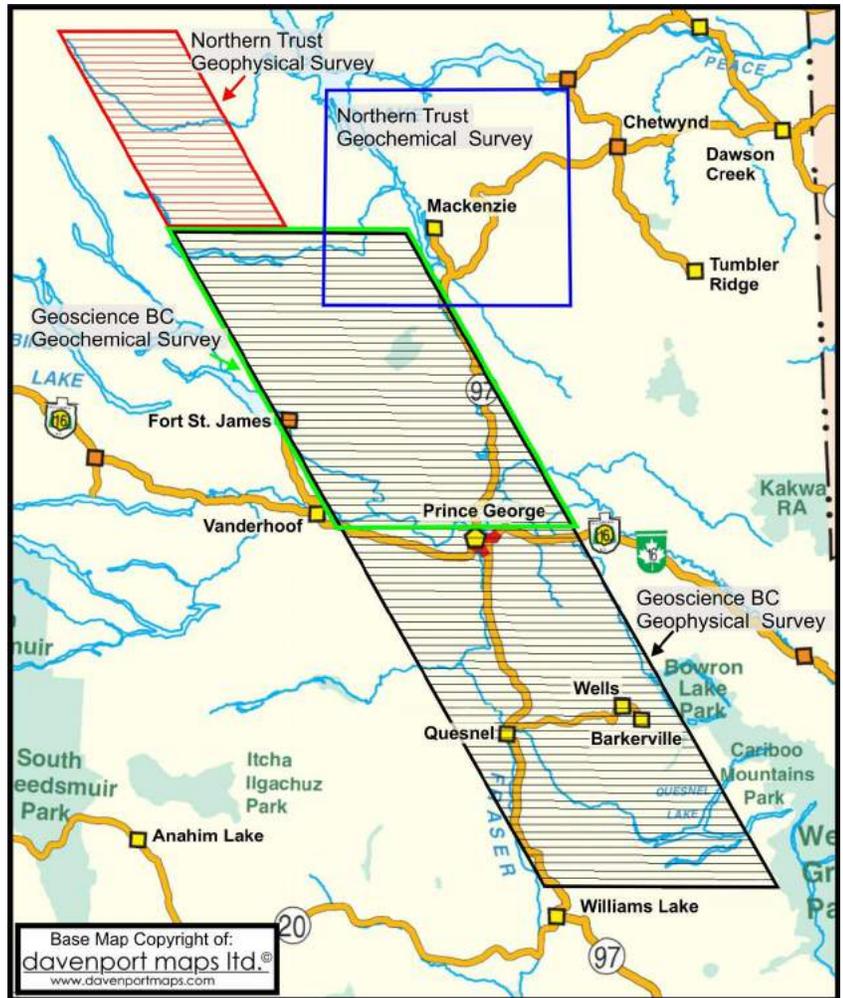
For more information about the Federal or Provincial projects in the Mountain Pine Beetle Collaborative Geoscience Plan, please contact:



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Road map of central BC, with geophysical and geochemical survey areas outlined



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If you have any questions concerning these surveys, or would like more information about Geoscience BC, please do not hesitate to contact us.

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