

GAC-MAC 2014: FIELD GUIDE SUMMARY

Tectono-Stratigraphic Setting of Base-Metal Deposits in the Bathurst Mining Camp, New Brunswick, Canada

GAC-MAC Fredericton 2014,
pre-meeting field trip

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FIELD TRIP OBJECTIVES

Bimodal volcanic and associated sedimentary rocks of the Middle Ordovician Bathurst Mining Camp are host to one of the world's greatest accumulations of massive sulphides. To date, the forty six Zn-Pb-Ag-Cu volcanogenic massive sulphide deposits that have been identified, collectively account for a pre-mining resource in excess of 500 million tonnes. The most famous of these, the world class Brunswick No.12 deposit, is a supergiant which produced in excess of 136 million tonnes of ore grading >12% (Zn + Pb) during its 49 year mine life.

This field trip will outline the



Figure 1. Reworked quartz-feldspar crystal tuff of the Nepisiguit Falls Formation, Brunswick No. 6 mine.

current understanding of the Bathurst Mining Camp based on work conducted over the past 30 years by the New Brunswick Geological Surveys Branch, the Geological Survey of Canada, various post-graduate (mainly through the University Of New Brunswick) and by multi-agency geoscience initiatives such as Exploration Science and Technology Initiative (EXTECH-II) and Targeted Geoscience Initiative (TGI). The trip will focus on the stratigraphic setting of massive sulphide mineralization in the Tetagouche and California Lake groups; emphasis will be placed on the type section of the Nepisiguit Falls

Formation (Fig. 1), which constitutes the immediate footwall of the Brunswick No. 6 and No. 12 deposits.

The trip will include visits to several past-producing mine sites, Brunswick No. 6, Austin Brook (Fig. 2), and Restigouche, and if mining operations permit, underground tours of the recently opened Halfmile Mine and past-producing Caribou Mine (Fig. 3), which are scheduled to resume operations in 2014. Both the Halfmile and Caribou deposits are being developed for production by Trevali Mining Corporation.



Figure 2. Poly-deformed Algoma-type iron formation, Austin Brook Mine.



Figure 3. Aerial view of the Caribou Mine (*circa* 1997).

ADDITIONAL INFORMATION

This four-day, pre-meeting trip departs from Fredericton on May 17 and will return to Fredericton on May 20. Although most outcrops to be visited are on roadsides, there will be a few short (<500 m) hikes. Participants must provide their own safety boots (steel toe and shank). Other protective equipment (glasses, hard hats, etc.) will be provided.