

Analysis of precious metal mineralization within the Bald Hill Antimony deposit, New Brunswick, Canada: a portable X-ray fluorescence study

ALEXANDRA GRAY AND DAVID LENTZ

Department of Earth Sciences, University of New Brunswick, Fredericton, New Brunswick E3B 5A3

The volcano-sedimentary rocks of the Annidale Group in the Bald Hill area of south-central New Brunswick have been actively explored for base metals and gold in recent years. As a result of this exploration, a significant amount of antimony and anomalous gold has been discovered along a northwest trending fault zone. To better understand the characteristics of the gold mineralization in the Bald Hill area, pXRF analysis and petrographic examination was completed on core samples. Samples were collected from drill core stored at the New Brunswick Department of Energy and Resource Development's core storage facility in Sussex and chosen from intervals that were enriched in gold based on drill hole assay data. These samples were then analyzed using an Olympus Vanta VMR model pXRF spectrometer. Analyses were run with a count time of 120 seconds to ensure the reliability of the collected data. The certified reference standards CD-1, DS-1, MA-2C, NIST-2710a, NIST- 2711a, SY-4, and a silica blank were analysed at the start and end of work sessions to ensure the accuracy and precision of the collected data over multiple days. The data quality assurance and control (QA/QC) was completed on the data to determine a linear correction factor to correct the data. Since accepted concentrations for standards are recorded in databases, the accepted concentrations can be compared with the recorded concentrations to determine the correction factor. This correction factor was then applied to correct the data for each desired element. With the data corrected, further analysis and interpretation of the data can now be completed to attempt to better understand the gold and silver mineralization within the area. [Poster]