Gold and Copper-Zinc Metallogeny Within Metamorphosed Greenstone Terrains, Hemlo-Manitouwadge-Winston Lake, Ontario, Canada: A Compendium

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This publication arose from the CIM Geology Division - District 4 Field trip to the area in 1984, stimulated mainly by the considerable interest and excitement generated by the discovery of the Hemlo gold camp. The massive sulphide deposits in the general Hemlo area were incorporated into the field trip to provide balance and fill out the program. The guidebook initially prepared for this field trip was updated and revised for publication. The subtitle, "A Compendium" serves as a warning to the reader that this publication is a brief summary, and generates an accommodating spirit in the reader. This reviewer is unable to refrain from referring to this publication as a guidebook.

Part of the reason for publishing this guidebook was to provide individuals with essential information to conduct their field trips in the Hemlo camp, particularly along the Trans-Canada Highway and paved secondary roads (permission to view field stops on private property is necessary); this publication serves this purpose admirably. The mine operators Teck, Noranda, and Lac Minerals each provided details in separate papers on their respective portions of the main orebody, and government geologists Muir and Patterson each contributed papers which describe the regional and local geologic framework of the Hemlo camp. From this perspective, the paper organization provided an interesting chronology of events which resulted in the discovery of one of the great gold camps in Canada. For those who wish to undertake an unsupervised field tour, Patterson's paper is particularly useful by virtue of its well-illustrated, well-described field stops (some field stops have been eliminated by construction), and the highly organized format.

The mining companies generously provided numerous highly informative surface tours during the exploration and preproduction stages of their respective properties, and government geologists coincidentally provided numerous high-quality geologic tours during this same period. The guidebook is a fitting tribute to the dedicated efforts of the many tour guides. Appropriately, the field trip relating to this guidebook occurred within the shadows of the new headframes, at a stage when underground tours were just starting, and responsibility for further tours was being transferred mainly to the underground geologists.

The geologic setting of the Winston Lake and Geoco volcanogenic massive sulphide deposits are briefly described in two separate papers. The editors infer that visits to these massive sulphide properties provide a basis for comparison with gold deposit settings, but other than a few general comments in the Introduction and Overview paper, this aspect was virtually ignored by the various authors. The Winston Lake paper alludes to successful application of alteration geochemistry and volcanology as search tools in the discovery of a "blind" massive sulphide deposit in an area that had already been extensively explored. The Geoco mine paper illustrates how alteration patterns associated with a highly metamorphosed volcanogenic massive sulphide deposit can still be identified, although in this case, alteration studies did not contribute to the discovery of the deposit. Explorationists seeking volcanogenic massive sulphide deposits would be well advised to look at alteration geochemistry as a powerful tool, and both Winston Lake and Geoco should comprise important case histories.

Overall, this publication appears to have been too rushed, resulting in editorial, grammatical, and spelling errors; most obviously, the list of MAPS (page iii) shows only two maps, giving the reader the impression that the list is incomplete, or a footnote explanation is required. Otherwise, this publication is somewhat dated: epigenetic, structural controls for Hemlo mineralization have somewhat displaced syngenetic controls; and full production has been achieved by each of the three operators who share the main zone deposit at Hemlo.

This publication is recommended for purchase by those who intend to visit the Hemlo camp, those who have visited the Hemlo area and would like to refresh their recollection, and those who are seeking historical information about the events leading to the discovery of the Hemlo orebodies. Geologists who would like to improve their awareness and understanding of alteration patterns associated with volcanogenic massive sulphide deposits would also benefit from this publication.