Geochemistry and petrography of the volcanic strata hosting the Flambeau Cu-Zn-Au Deposit in Rusk County, WI: A re-examination of Wisconsin's only past-producing Volcanogenic Massive Sulfide mine

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Introduction

Volcanogenic Massive Sulfides (VMS)

The tectonic framework and evolution of the Penokean Orogeny has recently been synthesized (Schulz and Cannon, 2007). These settings can be identified in ancient rocks by comparing trace element geochemistry with modern tectonic evolution. The Wisconsin Magmatic Terrane hosts many Cu-Zn-Au deposits but their geological and economic significance has not been examined in any detail.

Characteristics of Alteration

Study Area

VMS deposits produce a diverse suite of base and precious metals and are major sources of Cu, Zn, Pb, Au, and Ag.

Conclusions

The volcanic rocks are dominantly altered by cerite- and sericite alteration. The intense alteration assemblages of rocks are formed in a metal-intermediate volcanic rocks setting (A) Alteration assemblage (from L peg-, 2001) showing that volcanic rocks are dominated by cerite- and sericite alteration assemblages.

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References