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Stratigraphy, structure and lode gold system at the Central Manitoba mine trend,

Rice Lake greenstone belt, Archean Superior Province, Manitoba, Canada

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Abstract

The Central Manitoba mine trend is one of the most important lode gold districts in the Rice Lake greenstone-granitoid belt of the western Uchi Subprovince within western Superior Province, Manitoba, Canada. Neoarchean host rocks consist of a south-facing metavolcano-sedimentary succession (2.75–2.73 Ga) intruded by voluminous gabbroic sills and tonalitic-granodioritic plutons (2.73–2.72 Ga), as well as late aplite dikes (2.73–2.72 Ga) and quartz-feldspar porphyry dikes (2.73–2.71 Ga). Five generations (G₁-G₅) of deformation structures have been recognized through detailed geological mapping. The entire succession was folded during G₁ and G₂ prior to rare late aplite dike emplacement. All fault-fill veins and extension veins cut all lithologic units, and are structurally governed by late (G₃ and G₄) conjugate shear zones. Main gold mineralization occurs within fault-fill veins hosted by west-trending Download English Version:

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