

# Copper-Zinc

## MANITOBA CRITICAL MINERALS

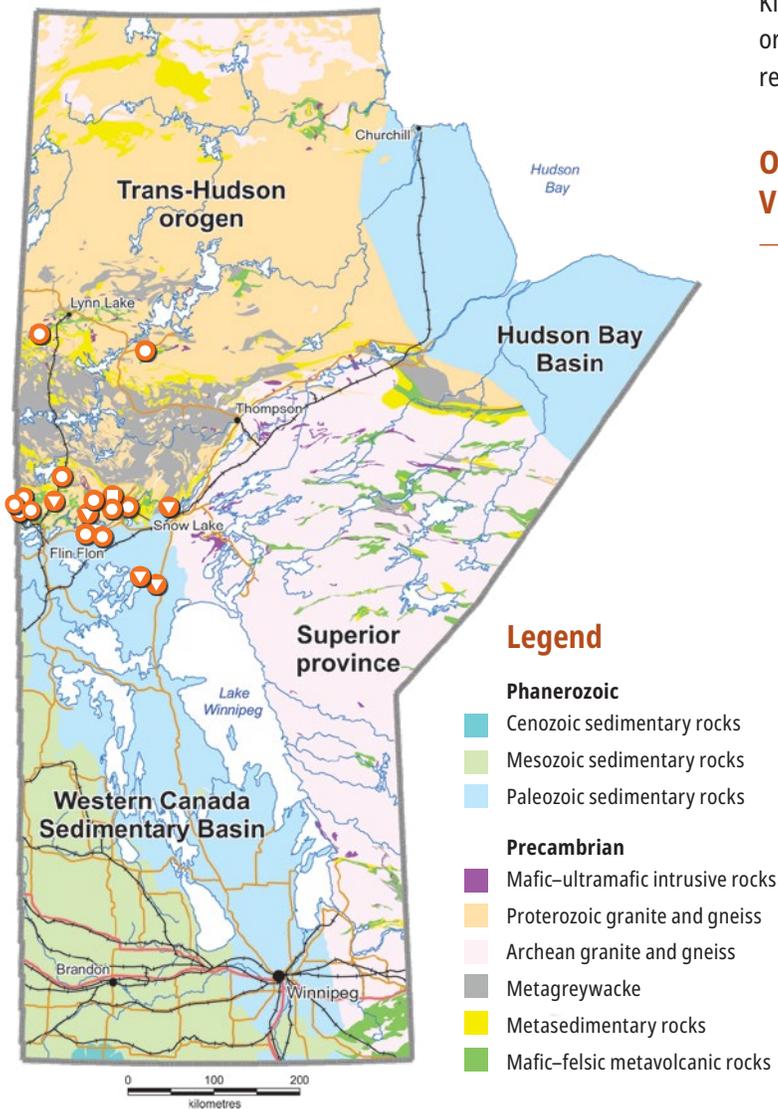


**Copper-zinc** production from volcanic massive sulphide (VMS) deposits in Manitoba dates back to the first discovery at Flin Flon in 1914. Since then, the Paleoproterozoic Flin Flon domain has been established as one of the most prolific VMS districts worldwide.

Despite nearly a century of systematic exploration, new VMS deposits continue to be found, including the world-class Lalor deposit of Hudbay Minerals Inc., which saw initial production in August 2012.

In Manitoba, world-class polymetallic (base- and precious-metal) VMS deposits are clustered in several significant mining districts around the margins of the Kiseeynew domain in the Paleoproterozoic Trans-Hudson orogen. This provides considerable scope for both regional and district-scale exploration.

### Ore samples from previously producing VMS deposits in the Flin Flon domain



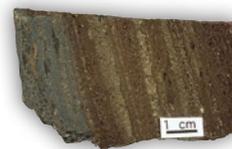
**Figure 1:** Geological map of Manitoba showing locations of selected VMS deposits.



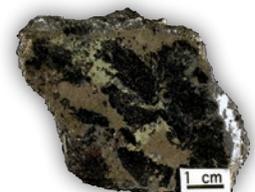
Calinan



Dickstone



Schist Lake



Ghost



Cuprus



Photo



**Figure 2:** The Northern Lights at Hudbay Minerals 777 Mine located in Flin Flon.

### **Flin Flon Domain**

The Paleoproterozoic Flin Flon domain contains 31 developed VMS deposits, from which more than 170 Mt of sulphide ore have been mined or are under development. The exposed portion of the Flin Flon domain is 250 km long by 75 km wide but extends over 150 km further south beneath a thin, geophysically transparent cover of Paleozoic sedimentary rocks. The sub-Paleozoic portion of the belt is at least twice the size of the exposed portion, contains along-strike equivalents of VMS-hosting assemblages, and is believed to have similar mineral potential.

### **Lynn Lake Domain**

Juvenile volcanic-arc assemblages in the Paleoproterozoic Lynn Lake domain are similar in age, chemistry and tectonic affinity to those hosting major VMS deposits in the Flin Flon domain.

### **Kisseynew Domain**

Turbiditic metasedimentary rocks of the Kisseynew domain were deposited in the back-arc basin to the volcanic arc represented by the Flin Flon and Lynn Lake domains.

### **Superior Province**

The northwestern portion of the Archean Superior province in Manitoba contains extensive greenstone belts of similar age, chemistry and tectonic affinity to those hosting major VMS deposits elsewhere in the Superior Province, including the world-class Noranda and Kidd Creek camps.



Manitoba is home to world-class deposits and high mineral potential in extensive underexplored terrains.

Learn more at [manitoba.ca/minerals](http://manitoba.ca/minerals)

### **Contact Information**

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