

Nonsulfide Zinc Mineralization in Europe: An Overview

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Abstract

A number of occurrences and deposits of nonsulfide zinc ores in Europe were the historical basis for the development of the zinc mining and smelting industry. The principal occurrences in Silesia (Poland), Sardinia (Italy), and northern Spain are described. These deposits are products of the supergene oxidation of primary carbonate-hosted sulfide minerals during the complex interplay of tectonic uplift, karst development, changes in the level of the water table, and weathering. The nonsulfide zinc mineral deposits in the Irish Midlands may represent an example of surface oxidation of primary sulfide mineral deposits, redeposition, and preservation under glacial till. The willemite-dominated mineralization at La Calamine, Belgium, may be related to paleoweathering or be of possible hydrothermal origin, similar to other willemite deposits in the world.

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