

Characteristic features of ores and mineral assemblage of Silurian-Devonian volcanogenic massive sulfide deposits in South and Middle Urals, Russia

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Abstract

The volcanogenic massive sulfide (VMS) deposits in South and Middle Urals are divided into Cyprus, Bessi, Baimak-, and Ural-types volcanogenic massive sulfide deposits. The aim of study is to clarify characteristic features of ores of the VMS deposits (Yaman-Kasy, Molodezhnoe, Dusa and Safyanovka deposits) in South and Middle Urals based on data of minerals assemblage and chemical compositions of ores. The chemical compositions of ores of Ural- and Baimak-type VMS deposits were characterized by high Fe-Cu and low Pb contents except Zn-Pb-rich ores of the Safyanovka deposit. The Yaman-Kasy, Molodezhnoe and Dusa volcanogenic massive sulfide deposits have similar characteristic, however the Safyanovka deposit is thought to be different type from the Yaman-Kasy, Molodezhnoe and Dusa deposits.