Copper-Gold Deposits of the Bolnisi Ore District

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The Bolnisi ore district is located in Southern Georgia in the Artvin-Bolnisi Unit of the Transcaucasus, which was formed in the framework of an active margin of the Eurasian continent. Several dozens of copper-gold-barite-polymetallic ore manifestations and deposits of the Bolnisi ore district are genetically and spatially tied to the products of subduction-related Late Cretaceous calcalkaline volcanism. They formed in transitional shallow submarine - to subaerial settings equivalent to epithermal conditions. Here we highlight the general characteristics of some deposits of the Bolnisi ore district to demonstrate the two principal styles of Cu-Au commercial mineralization.

The Sakdrisi, Davit-Gareji, Kvemo Bolnisi, Tsiteli Sopeli, as well as a number of other copper-gold manifestations of Bolnisi ore district can be assigned to volcanogenic epithermal deposits. The Madneuli possesses a number of characteristics that are, in part, typical of VMS deposits, and in part, resemble those of epithermal deposits. On the other hand, it differs from either type of deposits in a number of important attributes. Therefore, the Madneuli is viewed as an example of VMS-Epithermal transition deposits.