

**RELATIONSHIP BETWEEN GOLD AND COPPER METALLOGENESIS IN  
THE METALIFERI MTS.**

GHEORGHE C. POPESCU<sup>1</sup>, ANTONELA NEACȘU<sup>1</sup>

<sup>1</sup>University of Bucharest, Faculty of Geology and Geophysics, Department of  
Mineralogy, 1, N. Bălcescu Blvd., 010041, Bucharest, Romania

**Abstract**

Several “porphyry copper” structures have been discovered in the Metaliferi Mts. during the 70s, some of them of real economic value (i.e. Roșia Poieni, Bolcana). The Roșia Poieni ore deposit represents the largest Cu-Au porphyry structure in the Metaliferi Mts., matching in celebrity the gold-silver deposit at Roșia Montana, located at approximately 4 km. The existence of some paleo-calderas in the Metaliferi Mts. has recently been recognized in the Roșia Montana district (O'Connor et al., 2004) and in other perimeters. It is very probable that such calderas have functioned as complex, circular-shaped calderas which hosted hydrothermal activity. Such activity may have mobilized pre-concentrated mineralization lying around apical plutons of K<sub>2</sub> (Marcoux et al., 2002) or Precambrian age. This genetic scenario explains well the fundamental characteristic of the metallogenesis in the Metaliferi Mts.

**Keywords:** porphyry structure, vertical zoning, periplutonic zoning, hypogene zoning, Emmons zones, caldera-type structures

---

<sup>1</sup>e-mail:ghpop@geo.edu.ro