

## **Morphogenetic Types of Copper Deposits in Timok Magmatic Complex, Eastern Serbia, Yugoslavia**

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This paper shows the morphogenetic types of copper deposits in the Bor metallogenetic zone where gold appears as the most important supporting component. The most important deposits and occurrences of copper mineralization occurrences have been formed in vulcanoclastites and vulcanite mainly of andesite composition. These are dominant magmatic rocks in the whole Timok eruptive area and can be divided into five petrochemical volcanic stages: timocite, basaltic-andesite, latite, trachyandesite and albite trachyte phase.

The formation of deposits and copper mineralization occurrences is associated with the embossing of intrusive stage (monconite and diorite stage) and the embossing of their veins or extrusive equivalents. The above mentioned rocks are connected with hydrothermal orebearing solutions that transported and deposited copper mineralization. The deposits have been formed at different depths and under various conditions depending on physical-chemical features of hydrothermal solutions and surrounding environment. As the most important associated component in copper deposits in the Bor metallogenetic zone gold occurs.

The paper will present only the deposits and the occurrences in the Bor metallogenetic zone where gold appears as the important supporting component. Various types of copper mineralization have been selected: porphyry deposits, hydrothermal - vulcanogenetic deposits in the forms of stock or lentil (with massive sulphides), hydrothermal – vulcanogenetic deposits in the form of vein (with deposited and impregnated sulphide minerals), mechanically overdeposited sediments (formed by disintegration of previously formed massive sulphide deposits) and skarn deposits. The main features of the mentioned deposits will be presented, alteration mineralogy zoning in their adjacent vicinity and compared with the similar deposits and occurrences in the Timok eruptive area.

Key words: copper, gold, mineralisation, hydrothermal alteration, porphyry, Andesite.