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Study of phosphate and sulphate association from the Mine No. 6 “Exi” in the Lavrion mining district (Greece): chemistry and PXRD data

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Abstract

A large number of supergene minerals has been identified in the Lavrion mining district (Greece). The dominant part belongs to the group of arsenates or sulphates. The substitution of phosphorus for arsenic or the occurrence of phosphates is relatively rare at this mining district. The new occurrence of the association of supergene phosphates including phosphosiderite, mitridatite, jahnsite-(NaFeMg), fluorapatite and collinsite, in association with minerals of the alunite group, jarosite and natrojarosite in the Mine No. 6 “Exi” is therefore unique. A study of the chemical composition of these minerals and PXRD data of selected minerals are presented in this publication.

Key words: *jarosite-natrojarosite solid solution, collinsite, jahnsite-(NaFeMg), phosphosiderite, mitridatite, fluorapatite, phosphate occurrence, chemical composition, PXRD data, Mine No. 6 “Exi“, Lavrion, Greece*

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