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白果园黑色岩系型银（钒）矿床沉积古环境与银（钒）初始富集

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庄汉平 卢家烂

中国科学院广州地球化学研究所 (庄汉平，卢家烂，傅家谟)
，中国科学院广州地球化学研究所(刘金钟)

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摘要：

白果园银（钒）矿产于震旦系陡山沱组黑色色岩系中。矿床的地球化学和有机地球化学研究表明，黑色页岩含丰富以低等海生生物为主的腐泥型有机质，黑色页岩形成于局限的滞留海盆。

关键词：黑色岩系 银矿床 钒矿床 沉积环境 古环境

PALEOENVIRONMENT AND PRELIMINARY ENRICHMENT OF Ag (AND V) IN THE BAIGUOYUAN BLACK SHALE SERIES -HOSTED Ag(-V) DEPOSIT, HUBEI PROVINCE, CHINA

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Zhuang Hanping Lu Jialan Fu Jiamo Liu Jinzhong

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Abstract:

Baiguoyuan Silver-Vanadium deposit is hosted by the Upper Sinian Doushantuo Formation black shales that were rich in Ag (up to 250ppm) and V (V2O5 up to 2. 484 weight percent). Studies on geochemistry and organic geochemistry show that the black shales contain amount sapropelic organic matter deriving from marine plankton and their DOP (degree of pyritization) values is very high, greater than 0. 70, indicating a euxinic bottom water environment. The marine transgression during the early Early Sinian was responsible for the formation of the black shales rich in Ag and V and organic carbon. The sea level rise during transgression made the water cloumn thicker and a oxic-anoxic-euxinic three-storeyed structure of water cloumn formed. Marine organisms collecting Ag and V from sea water and were deposited on the surface of sediment covering by euxinic bottom water. Within such a euxinic condition, organic matter would be decomposed rapidly by reducing bacteria; however, Ag and V appeared inactive in a reduced euxinic environment rich in H2S and they might be obserbed by residual organic matter, clays or Fe, Mn oxide/hydroxide, or surface-complexed with pryite formed in the early diagenesis. After a long sedimentation peroid, the balck shales that were rich in both Ag, V and organic matter formed.

Keywords:Baiguoyuan Ag(-V) deposit black shale organic matter preliminary enrichment

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