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江西冷水坑斑岩型铅锌银矿床地质特征、热液蚀变与成矿时限

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摘要：

江西冷水坑铅锌银矿床是我国重要的铅锌银矿床之一，也是世界上少有的斑岩型铅锌银矿床。冷水坑斑岩
代月凤山火山盆地边缘，含矿斑岩为燕山中期碱性花岗斑岩，侵位于上侏罗统火山岩地层内，斑岩体边部发育大
矿化类型，即斑岩型矿化与层状改造型矿化，此两种均与碱性花岗斑岩有关。矿化以Pb、Zn、Ag为主，伴生少量
发生在斑岩体内以及接触带中，具有面型矿化特点并显示出明显的矿化分带性。层状改造型以铁锰银铅锌矿化为
花岗斑岩附近的火山岩含铁锰地层中，产状与火山岩地层一致。铁锰碳酸盐铅锌银矿体在靠近斑岩体时，银铅锌
斑岩体，矿化明显较弱。围岩蚀变作用明显，主要为绢云母化、绿泥石化、碳酸盐化、硅化和黄铁矿化。矿化包
型铜（钼）矿床不同，缺少斑岩铜（钼）矿床早期蚀变的钾交代作用（黑云母化与钾长石化），发育大量铁锰碳
定的分带性，由岩体内向外蚀变可以分为三个带：绿泥石绢云母化带、绢云母化碳酸盐化硅化黄铁矿化带和碳酸
铅锌银矿化与绢云母化和绿泥石化蚀变密切相关。通过对蚀变矿物绢云母的 40 Ar/ 39 Ar同位素测定
年龄为162.8 ±1.6Ma，与含矿斑岩形成时间一致，说明冷水坑斑岩型铅锌银成矿作用发生于中国东部燕山中期

关键词：斑岩型铅锌银矿床 矿化特征 蚀变分带 40 Ar/ 39 Ar年龄 冷水坑

Geological Characteristics and Mineralization Timing of the Lengshuikeng Porphyry Pb
Jiangxi Province Download Fulltext

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Fund Project:

Abstract:

Lengshuikeng deposit in Jiangxi Province is one of the most important Pb Zn Ag deposits i
rare, typical porphyry Pb Zn Ag deposit in the world. It is hosted in the Yuefengshan Mesozoic
China. The ore bearing porphyry is alkaline granite porphyry intruding into upper Jurassic volca
Yanshanian period. A large number of cryptoexplosion breccia is developed around the edge of the
Lengshuikeng ore district, there are two types of mineralization, porphyry type and layered tran
which are related to the alkaline granite porphyry. Porphyry type Pb Zn Ag mineralization occu
contact zone of the porphyry to the volcanic rocks, showing a distinct mineralization zoning. The
is characterized by Fe Mn Ag Pb Zn Mineralization, with the orebodies concealing in the volca
manganese carbonate, which is adjacent to the alkaline granite porphyry. Pb Zn Ag mineralizatio
mass outward. The alteration of wall rocks in the Lengshuikeng deposit includes sericitization,
carbonatization, silicification and pyritization. The Lengshuikeng porphyry Pb Zn Ag deposit di
porphyry Cu Mo deposit in its abundant Fe Mn carbonate alteration instead of potassium replacem
alteration stage of porphyry Cu (Mo) deposits. The ore district, however, is of three distinct zo
mineral assemblages. Three zonations classified are chlorite sericite zone, the sericite carbonat
the carbonate sercite zone from the inner of the porphyry outward. The Pb Zn Ag mineralization
closely related to the sercite and chlorite alteration. 40 Ar/ 39 Ar dating of sericite
162.8 ±1.6Ma, which is consistent with that of the ore bearing porphyry, indicating that the de
intracontinental setting in Eastern China during the mid Yanshanian period.

Keywords:porphyry lead zinc silver deposit mineralization characteristic alteration zoning
dating Lengshuikeng