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三江北衙金多金属矿床容矿岩体相对氧化状态特征

作者	单位	E-mail
蒋成竹	中国地质大学地质过程与矿产资源国家重点实验室, 北京 100083	
王庆飞	中国地质大学地质过程与矿产资源国家重点实验室, 北京 100083	wqf@cugb.edu.cn
李龚健	中国地质大学地质过程与矿产资源国家重点实验室, 北京 100083	
马楠	中国地质大学地质过程与矿产资源国家重点实验室, 北京 100083	
胡兆初	中国地质大学地质过程与矿产资源国家重点实验室, 武汉 430074	

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摘要：

氧逸度反应了岩浆的温度、压力和物质组成等信息,目前通过计算锆石Ce(Ⅳ)/Ce(Ⅲ)比值来指示岩浆氧逸度特征是一个行之有效的方法。本文计算分析了北衙金多金属矿床中容矿岩体的锆石Ce(Ⅳ)/Ce(Ⅲ)比值。北衙超大型金矿床位于金沙江-哀牢山钾质岩浆岩带中段,发育与钾质侵入岩密切相关的金多金属成矿系统,本次研究了矿区中一个成矿前容矿岩体不同部位的锆石Ce(Ⅳ)/Ce(Ⅲ)比值特征,结果显示其总体趋势是岩体外带Ce(Ⅳ)/Ce(Ⅲ)平均值高于岩体内带,即位于岩体外带的斑岩相对氧化性较强,且单颗粒锆石Ce(Ⅳ)/Ce(Ⅲ)比值变化较大,可能受到岩体空间位置分布的影响。对比分析钾质岩浆岩带上其它典型矿床的岩体锆石Ce(Ⅳ)/Ce(Ⅲ)比值特点,显示出不同矿床之间该比值差异较大;Ce(Ⅳ)/Ce(Ⅲ)比值高并不一定指示是成矿岩体,应开展单一锆石颗粒单点Ce(Ⅳ)/Ce(Ⅲ)比值分布特征统计。

英文摘要：

Oxygen fugacity reflects information, such as temperature, pressure and composition of the magma, and now, the calculation of zircon Ce(Ⅳ)/Ce(Ⅲ) ratio is an effective method to indicate the feature of magma oxygen fugacity. This paper analyze the zircon Ce(Ⅳ)/Ce(Ⅲ) ratio of intrusions in Beiya gold-polymetallic deposit. Beiya super-large gold de posit is located in the central part of the Jinshajiang-Ailaoshan potassic magmatic rocks belt and develops a gold-poly metallic metallogenic system which is closely related with potassic intrusive rocks. The intrusive rocks which lie differe nt positions of the stock which formed before the mineralization are all analyzed, and the result shows that the avera ge Ce(Ⅳ)/Ce(Ⅲ) ratio of intrusive rocks which locate in the edge of the stock is higher than those in the inner zone of the stock, that is indicates that oxidation states of intrusive rocks which lie outer zone of the stock is stronger, and in dividual zircons have a large range of Ce(Ⅳ)/Ce(Ⅲ) ratios, this situation maybe affect by the spatial site distribution o f intrusive rocks. Analysis of zircon Ce(Ⅳ)/Ce(Ⅲ) ratios of Beiya and other typical deposits in potassic magmatic rocks belt reveal that the ratios are various in different deposits. The intrusive rocks with high Ce(Ⅳ)/Ce(Ⅲ) ratios do not n ecessarily indicate they are metallogenic rocks, it needs to refer to the average of a serial of single-point Ce(Ⅳ)/Ce (Ⅲ) values analyzed in a plane.

关键词：氧化状态 侵入岩 金矿床 云南北衙

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