

李向文,王可勇,钱焯,王献忠,常亮,韦烈民,孙丰月. 2013. 吉林大黑山钼矿床成矿流体地球化学特征及其地质意义. 岩石学报, 29(9): 3173-3182

吉林大黑山钼矿床成矿流体地球化学特征及其地质意义

作者	单位	E-mail
<a href="#">李向文</a>	<a href="#">吉林大学地球科学学院, 长春 130061</a> ; <a href="#">武警黄金部队第三支队, 哈尔滨 150086</a>	
<a href="#">王可勇</a>	<a href="#">1. 吉林大学地球科学学院, 长春 130061</a>	<a href="mailto:wangky@jlu.edu.cn">wangky@jlu.edu.cn</a>
<a href="#">钱焯</a>	<a href="#">吉林大学地球科学学院, 长春 130061</a>	
<a href="#">王献忠</a>	<a href="#">武警黄金部队第三支队, 哈尔滨 150086</a>	
<a href="#">常亮</a>	<a href="#">吉林大学地球科学学院, 长春 130061</a>	
<a href="#">韦烈民</a>	<a href="#">吉林大学地球科学学院, 长春 130061</a>	
<a href="#">孙丰月</a>	<a href="#">吉林大学地球科学学院, 长春 130061</a>	

基金项目: 本文受国土资源大调查项目(1212010630708)资助.

摘要:

大黑山钼矿床为一产于燕山早期花岗闪长岩-花岗闪长斑岩复式侵入体内的超大型斑岩型矿床,按矿物组合不同,其成矿作用可划分为 I 浸染状黄铁矿±辉钼矿-石英; II 辉钼矿-石英; III 黄铁矿±黄铜矿-石英及 IV 贫硫化物-石英 4 个阶段。流体包裹体研究表明, I、II 矿化阶段石英中主要发育含 NaCl 子矿物三相、富气相及气液两相三种类型的流体包裹体,成矿流体为中高温、高盐度 NaCl-H<sub>2</sub>O 体系热液,来源于含矿的花岗闪长斑岩体; III、IV 矿化阶段石英中主要发育气液两相包裹体,成矿流体为中低温、低盐度 NaCl-H<sub>2</sub>O 体系热液,来源于花岗闪长斑岩岩浆流体与大气降水混合物。大黑山钼矿床成矿流体地球化学特征与陆内环境下斑岩钼矿床 NaCl-CO<sub>2</sub>-H<sub>2</sub>O 体系型成矿热液有明显区别,暗示其形成于非陆内环境,而是中生代太平洋板块俯冲体制下活动大陆边缘或岛弧环境岩浆活动产物。

英文摘要:

Daheishan molybdenum deposit is a superlarge porphyry type deposit that occurred in granodiorite-granodiorite porphyry complex of Early Yanshanian Period. Based on mineral assemblages, the mineralization can be classified into four stages, which are I disseminated pyrite±molybdenite-quartz, II molybdenite-quartz, III pyrite±chalcopyrite-quartz and IV sulfide-poor quartz respectively. Fluid inclusion study showed that there are halite-bearing three-phase, vapor-rich as well as aqueous two-phase three types of fluid inclusions developed in quartz of mineralization stage I and II, the ore-forming fluids are of medium to high temperature, high salinity NaCl-H<sub>2</sub>O type hydrothermal solutions correspondingly and mainly came from ore-bearing granodiorite porphyry. Only aqueous two-phase type of fluid inclusions were observed in quartz of mineralization stage III and IV, which corresponds to low to medium temperature, low salinity NaCl-H<sub>2</sub>O type hydrothermal solutions and mainly derived from ore-bearing granodiorite porphyry and meteoric water. The geochemical features of ore-forming fluids of Daheishan molybdenum deposit is very different from the NaCl-CO<sub>2</sub>-H<sub>2</sub>O type ore-forming fluids of the inner continental porphyry type molybdenum deposit, which implies that Daheishan molybdenum deposit was not formed in inner continental environment, but in active continental margin or arc environment instead.

关键词: [大黑山钼矿床](#) [成矿流体](#) [地球化学特征](#) [斑岩型矿床](#) [吉林省](#)

投稿时间: 2012-02-24 最后修改时间: 2013-08-01

[HTML](#) [查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

