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豫西嵩县前范岭石英脉型钼矿床地质特征及辉钼矿Re-Os同位素年龄

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摘要:

位于熊耳山-外方山地区的前范岭钼矿是东秦岭地区新近发现的石英脉型钼矿床之一。赋矿围岩为古元古界熊耳群安山质火山岩类。矿体主要以含辉钼矿石英脉产出,矿石类型以石英脉型为主。金属矿物以辉钼矿和黄铁矿为主,脉石矿物以石英为主,其次为方解石、萤石等。围岩蚀变类型有硅化、钾长石化、青磐岩化等。对6件辉钼矿样品进行Re-Os同位素测年所获得的模式年龄为 $233.3 \pm 3.3 \sim 248.2 \pm 3.5$ Ma,等时线年龄为 239 ± 13 Ma,表明矿床形成于中三叠世。矿床的成矿作用发生于华北与扬子两个板块碰撞对接的晚期阶段。区域上整体的挤压造成了局部的剪切和伸展环境,这种环境为控矿断裂的形成和成矿流体的运移提供了有利条件。嵩县境内现已发现的多处脉型钼矿床很可能形成于同一时期(三叠纪),它们构成了熊耳山与外方山之间的嵩县脉型钼矿田。

英文摘要:

The Qianfanling Mo deposit located in the Xiong'ershan-Waifangshan area is a newly discovered quartz-vein type Mo deposit in the East Qinling molybdenum belt. The host rocks of the deposit are Paleoproterozoic andesitic volcanic rocks of the Xiong'er Group. The orebodies occur as molybdenite-quartz veins and the major ore type is quartz-vein type. The main metallic minerals are molybdenite and pyrite. Quartz is the most abundant gangue mineral, and other gangue minerals include calcite and fluorite. The main alteration types of wall rocks are silicification, K-felsparization and propylitization etc. Six molybdenite-bearing samples were selected for precise Re-Os dating, which yielded model ages ranging from 233.3 ± 3.3 Ma to 248.2 ± 3.5 Ma and an isochron age of 239 ± 13 Ma. The deposit was formed in the Middle-Triassic. The Qianfanling Mo deposit formed in the late stage of collision of North China and Yangtzi cratons. Local shear and extension setting formed by a great regional collision are the favorable factors for the formation of the ore-controlling faults and migration of the ore-forming fluid. Many vein-type Mo deposits have been found in Songxian County, and they are likely to be formed at the same time (Triassic). These quartz-vein type Mo deposits constitute the vein-type Mo deposit field in Songxian County between the Xiong'ershan and Waifangshan area.

关键词: [矿床地质特征](#) [Re-Os同位素年龄](#) [石英脉型钼矿](#) [前范岭](#) [豫西](#)

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