

## 东天山红石金矿区石英钠长斑岩Ar-Ar和U-Pb年龄及构造和成矿意义讨论

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中文摘要: 红石金矿区位于东天山觉罗塔格地区秋格明塔什—黄山韧性剪切带内, 石英钠长斑岩为矿体顶底板围岩, 该金矿的赋矿地层干墩组为一套以类复理石杂砂岩建造为主的岩石组合。石英钠长斑岩和地层均发生较强的糜棱岩化, 石英钠长斑岩的锆石SHRIMP U-Pb定年结果为 $(344 \pm 4)$  Ma, 说明被该岩体侵入的干墩组地层时代不晚于 $(344 \pm 4)$  Ma, 从同位素年代学角度上限定了干墩组地层时代为早石炭世, 表明秋格明塔什—黄山地区在该时期还处于深海-半深海沉积环境。对石英钠长斑岩糜棱岩化阶段形成的绢云母进行 $40\text{Ar}-39\text{Ar}$ 阶段升温测年分析, 得到坪年龄为 $(262 \pm 1)$  Ma。该年龄与秋格明塔什—黄山韧性剪切带中-西段右行走滑剪切作用时代一致, 说明红石金矿可能与走滑剪切作用有关, 结合前人对红石金矿成矿时代的研究结果, 认为秋格明塔什—黄山韧性剪切带右行走滑剪切作用是红石金矿成矿作用的主因。

中文关键词: [东天山](#) [红石金矿](#) [干墩组](#) [早石炭世](#) [走滑剪切](#)

## Ar-Ar and Zircon U-Pb Dating of Quartz Albitophyres in the Hongshi Gold Ore District of Eastern Tianshan and Its Metallogenic Significance

**Abstract:** The Hongshi gold deposit is located in Qiugemingtashi-Huangshan ductile shear zone of Qoltag area, Eastern Tianshan. Quartz albitophyres constitute the wall rock of the ore bodies. The ore-bearing strata are Gandun Formation consisting of a series of flysch sediments. Both the quartz albitophyres and the ore-bearing strata have experienced mylonitization. Zircon SHRIMP U-Pb dating shows the age of quartz albitophyres is  $(344 \pm 4)$  Ma, indicating that the strata of Gandun Formation, which was intruded by the quartz albitophyres, were formed before  $(344 \pm 4)$  Ma. It means that the Qiugemingtashi-Huangshan area was of bathyal-abyssal facies in the Early Carboniferous period. The mylonitic quartz albitophyres were analyzed by  $40\text{Ar}-39\text{Ar}$  step incremental heating method, and an  $40\text{Ar}-39\text{Ar}$  value of  $(262 \pm 1)$  Ma was obtained. This age is in accordance with the age of dextral strike-slip of the middle and west part of Qiugemingtashi-Huangshan ductile shear zone, suggesting that the mineralization of the Hongshi gold deposit was probably related to the strike-slip. In combination with previous research achievements obtained for the metallogenic epoch of the Hongshi gold deposit, the authors have come to the conclusion that dextral strike-slip of Qiugemingtashi-Huangshan ductile shear zone was the main factor responsible for the mineralization of the Hongshi gold deposit.

**keywords:** [Eastern Tianshan](#) [Hongshi gold deposit](#) [Gandun Formation](#) [Early Carboniferous](#) [strike-slip](#)

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