

## 新疆西天山吐拉苏—也里莫墩火山岩带年代学：对加曼特金矿成矿时代的约束

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中文摘要:吐拉苏—也里莫墩火山岩带是西天山北段晚古生代构造—岩浆成矿带的重要组成部分,它严格控制着矿带内金矿床的时空分布。在充分研究前人资料的基础上,本文实测了里莫墩地区加曼特金矿围岩大哈拉军山组火山岩剖面,发现火山岩地层与矿化关系密切。利用LA-ICP-MS锆石U-Pb方法测定了金矿赋矿围岩(英安岩)的形成时代,其 $^{206}\text{Pb}/^{238}\text{U}$ 谱比年龄为 $354.0 \pm 1.3 \text{ Ma}$ (MSWD=1.4),表明加曼特金矿赋矿围岩大哈拉军山组火山岩形成于早石炭世,金矿成矿时代被约束在 $354.0 \pm 1.3 \text{ Ma}$ 至早石炭世维宪期之间;区域对比表明,吐拉也里莫墩火山岩带中分布着大规模的中酸性火山岩-火山碎屑岩,受构造控制影响,东西段火山岩的喷发时间存在一定的差异。

中文关键词:[加曼特金矿](#) [早石炭世](#) [锆石U-Pb年龄](#) [吐拉苏—也里莫墩火山岩带](#) [西天山](#)

## The Chronology of Tulasu-Yelimodun Volcanic Belt: Constraints on the Metallogenic Epoch of the Jiamante Gold Deposit, Western Tianshan Mountains of Xinjiang

**Abstract:**The Tulasu-Yelimodun volcanic belt is a key component part of the Late Paleozoic tectonic-magmatic metallogenic belt in the northern part of western Tianshan Mountains and strictly controls the temporal and spatial distribution of gold deposits within the ore belt. Based on geological data available, the authors measured the section Dahalajunshan Formation volcanic host rocks of the Jiamante gold deposit in Yelimodun area, and the result shows that the volcanic strata are closely related to mineralization. LA-ICP-MS dating of zircons separated from dacite (the host rock of the gold deposit) yields a concordant  $^{206}\text{Pb}/^{238}\text{U}$  age of  $354.0 \pm 1.3 \text{ Ma}$ (MSWD=1.4), suggesting that volcanic host rocks were formed in the Early Carboniferous, and the metallogenic epoch of the Jiamante gold deposit is constrained between  $354.0 \pm 1.3 \text{ Ma}$  and the Visean period of the Early Carboniferous. Regional correlation shows that there exist extensive intermediate-acidic volcanic-volcaniclastic rocks. Meanwhile, due to tectonic controls, there are differences in eruption time between the eastern and the western Tulasu-Yelimodun volcanic belt.