

青海锡铁山地区滩间山群的地质特征及同位素年代学

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摘要: 滩间山群是指出露于青藏高原北部柴达木盆地北缘的一套早古生代的浅变质火山岩—沉积岩地层。变质火山岩主要由玄武岩、玄武安山岩组成, 夹少量变质英安岩。变质沉积岩主要由绢云片岩、含炭绢云片岩、大理岩以及砂岩、砾岩组成。前人认为这套地层的时代为晚奥陶世。野外地质研究发现, 这套地层遭受多期强烈构造变形和低绿片岩相变质作用的改造。同位素年代测试显示, 其中变质英安岩的单颗粒锆石U—Pb测年的上交点年龄为  $(953 \pm 27)$  Ma, 下交点年龄为  $(486 \pm 13)$  Ma, 结合锆石形态特征以及区域地质资料分析, 认为滩间山群的时代应为早奥陶世。

关键词: 锆石U—Pb年龄; 大陆裂谷; 滩间山群; 青藏高原

中图分类号: P534.42; P597 文献标识码: A 文章编号: 1671—2552 (2003) 01—0028—04

Geological Characteristics and Isotopic Age of Tanjianshan Group along Northern Margin of Chaidam Block

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Abstract: The Tanjianshan Group refers to a Early Paleozoic low-grade metamorphic volcanic-sedimentary suite exposed along the northern margin of the Qaidam basin in the northern Qinghai-Tibet Plateau. The metamorphic volcanic rocks are composed mainly of basalts and basaltic andesites with some dacites. The metamorphic sedimentary rocks consist dominantly of sericite schists, carbonaceous sericite schists and marbles, as well as metasandstones and conglomerates. Field geological studies of the Tanjianshan Group suggest that the rocks have undergone polyphase strong tectonic deformation and low greenschist facies metamorphism. Single zircon U—Pb dating gives an upper intercept age of  $953 \pm 27$  Ma and a lower intercept age of  $486 \pm 13$  Ma. A combination of a study of the regional geological data and zircon morphology indicates an Early Ordovician age for the Tanjianshan Group.

Key words: zircon U—Pb age; continental rift; Tanjianshan Group; Qinghai-Tibet Plateau