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新疆东天山康古尔塔格金矿带研究

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摘要：

通过矿床地质和Ｒｂ－Ｓｒ法，Ｕ－Ｐｂ法，＾４０Ａｒ－＾３９Ａｒ法，Ｓｍ－Ｎｄ法生代学及氢，氧，硫，碳，锶，铅等稳定同位素与流体包裹体研究，查明东天康古尔塔格金矿带中浅成低温热液型金矿，韧性剪切带蚀变岩型金矿及花岗岩有关的石英脉型金矿三者大地构造背景相同，成矿时代一致。成矿物质来源相似，流体包裹体成分类同，属同一成矿系列，三者之间主要是成矿地质环境不尽相同，成矿元素组合有差异，控矿构造不同，反映成矿

关键词：金矿床 矿带 液包体 同位素年代

STUDY ON THE KANGGUR TAG GOLD ZONE IN THE EASTERN TIANSHAN MOUNTAINS

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Abstract:

In the Kanggur Tag gold ore zone, have been found three type of gold deposits, i. e.: (1) shallow low-temperature hydrothermal type, (2) ductile shear belt altered rock type and (3) magmatic hydrothermal quartz vein type. Through studies of ore deposit geology isotope chrono-logic dating with different methods of Rb-Sr, U-Pb, 40Ar-39Ar and Sm-Nd stable isotopic geo-chemistry of H, O, the C, S, Sr and Pb, and fluid inclusions in minerals. The three types of gold deposits occur in the same tectonic setting, probably on the northern margin of the Aqishan-Yamansu island arc on the northern active continental margin of the Tarim Plate. The metallo-genic time of the three types appears to be mainly middle-late Variscan, with the isotopic age ranging from 290 Ma to 244 Ma. The three had the same metallogenic source and the initial 87Sr/86 Srratio ranges from 0. 7053 to 0. 7061 and the variation is small. The metallogenic fluids are similar in composition all belonging to Na-K-Cl type with less Ca and Mg and reductive gases CH4, C2H6 and CO. But the three types of gold deposjts also have some differences. The shallow low-temperature hydrothermal type is mainly associated with volcanic rocks and caldras; the duc-tile shear belt altered rock type is located in the ductile shear belt in the volcanic area. The mag-matic hydrothermal quartz vein type is closely linked with magmatic rocks of the late orogenic stage. Besides, different types of gold deposits also show slight differences in metallogenic ele-ment association and Sr, S and O stable isotopic composition (which reflect the source of metallogenic material and fluid inclusion composition. Based on the above materials, a genetic model of gold deposits series in the Kanggur Tag gold ore zone has been proposed.

Keywords:isotope chronology fluid inclusion Kanggur Tag gold zone East Tianshan Xinjiang

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