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新疆延东斑岩铜矿床火山机构、容矿岩石及热液蚀变

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摘要:

延东斑岩铜矿床位于新疆东天山晚古生代大南湖岛弧中。延东矿区出露地层是石炭纪企鹅山组火山-沉积岩,我们研究提出延东矿区出露火山-沉积岩以及浅成侵入岩为石炭纪火山喷发-岩浆侵入产物,并将其划分成两个旋回五个岩相:第一旋回包括溢流相(玄武岩和安山岩)、爆相(集块角砾熔岩)和爆发-沉积相(凝灰岩);第二旋回包括次火山相(闪长玢岩和闪长岩)和浅成侵入相(斜长花岗斑岩)。容矿岩石是次火山相闪长玢岩和闪长岩以及浅成侵入相的斜长花岗斑岩。闪长玢岩发育中性斑岩蚀变系统,包括内部的绢云母-绿泥石蚀变带和绿泥石-绢云母蚀变带和外围的青磐岩化带,其中绢云母-绿泥石蚀变带控制本区部分富矿体的形成和分布;斜长花岗斑岩发育酸性斑岩蚀变系统,从中心向外依次黄铁绢英岩化带、强绢云母化带和弱绢云母化带,黄铁绢英岩化带控制本区部分富矿体的形成和分布。这两个蚀变系统以钾硅酸盐化蚀变不发育和绢云母化广泛发育为特点。

英文摘要:

Yandong large-size porphyry copper deposit is located in the Late Paleozoic Dananhu island arc in Eastern Tianan, Xinjiang. Lower Carboniferous Qi'eshan Group occurred in the Yandong region. New results recognize a volcanic apparatus at Yandong that includes two cycles comprising five lithofacies. The first cycle consists of the effusive (basalt and andesite), explosive (auto-brecciated lava) and pyroclastic phases (tuff). The second cycle is characterized by the intermediate and felsic intrusions. The intrusions, including the diorite porphyry, aplite diorite and plagiogranite porphyry, are ore-bearing intrusions. Both diorite porphyry (including aplite diorite) and plagiogranite porphyry host the bulk of the copper mineralization at Yandong and have been overprinted by the two distinct alteration systems. Diorite porphyry has been overprinted by three alteration assemblages, including the central sericite-chlorite assemblage and chlorite-sericite assemblage and distal propylitic assemblage. Cu-Fe sulfides are closely associated with the sericite-chlorite assemblage. Plagiogranite porphyry, cutting the early-stage diorite porphyry, has undergone the central phyllic and surrounding strong and weak sericite alteration. Intense phyllic alteration produced the high-grade copper ore at Yandong. The two alteration systems at Yandong were characterized by rare potassic alteration and widespread sericite alteration.

关键词: [斑岩铜矿床](#) [火山机构](#) [蚀变分带](#) [延东](#) [东天山](#)

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