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# 新疆东天山斑岩型铜矿带及其大地构造格局

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芮宗瑶 刘玉琳 王龙生 王义天

中国地质科学院矿产资源研究所，北京大学地质学系，中国地质科学院矿产资源研究所，中国地质科学院矿产资
100871，北京，100037，北京，100037

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摘要：

新疆哈密南部发现的土屋、延东大型斑岩铜(钼)矿床,构成了东天山斑岩铜矿带。其中成矿的斜长花岗斑
Sr等时线法和单颗粒锆石U-Pb法),辉钼矿的同位素年龄为320 Ma(Re-Os等时线法),蚀变岩的同位素年龄为341～
到粗安岩,可能属于泥盆纪(416Ma,Sm-Nd法;>356 Ma、390 Ma、440 Ma,单颗粒锆石U-Pb法)。矿床成因归属为岛
矿带的南部为著名的康古尔塔格金矿带,再往南为星星峡银矿带。这些造山带矿床组合由北而南构成斑岩型铜(钼
液型金矿带→浅成热液型(构造蚀变带型)钼矿带,显示了构造岩浆是由北而南下插的,岩浆侵位时间北老南新,花
北而南加深。反映壳幔演化的东天山构造岩浆作用从370 Ma到240 Ma、从北部的哈尔里克和康古尔塔格到南部的
岗质岩浆演化带,丝毫看不到深部作用过程由于古生代东天山数度拉张沦为海槽而被中断的迹象。基于以上主要
型铜矿、韧性剪切带型金矿和构造蚀变带型银矿的形成机制及其大地构造格局,建立了东天山造山带的成矿模型,

关键词：斑岩铜矿床 俯冲带 构造岩浆演化 天山 新疆 形成机制 找矿方向

# The Eastern Tianshan Porphyry Copper Belt in Xinjiang and Its Tectonic Framework

RUI Zongyao,LIU Yulin,WANG Longsheng,WANG Yitian1) Institute of Mineral Resources,Chinese Academy
Sciences,Beijing,1000372) Department of Geology,Peking University,Beijing,100871

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Abstract:

The Tuwu and Yandong large porphyry copper (molybdenum) deposits were discovered recently i
form the Eastern Tianshan porphyry copper belt. As shown by the chronological constraints, the ag
related to mineralizaiton is about 369 ~ 356 Ma (Rb-Sr isochron dating and single-grain zircon U-
molybdenite is 320 Ma (Re-Os isochron dating) , and the age of al-tered rocks is about 341-310 Ma.
trachybasalt and trachyandesite probably oc-curred in the Devonian (Sm-Nb age, 416 Ma; single-gra
390 Ma and 440 Ma). The porphyry copper deposits are the product of island-arc volcanism-plutonis
porphyry copper belt is the well-known Kanggurtag gold belt, and further south is the Xingxingxia
from north to south, the assemblage of the erogenic deposits is manifested as the porphyry copper
shear and epithermal gold belt-epithermal (tectonic alteration) silver belt. The instrusion ages
those in the south. All the evidence indicates that the partial melting depths of granitic magma
implies that the tectonomagmatic plane was subducted from north to south. As the reflection of th
tectonomagmatism in the Eastern Tianshan persisted from 370 to 240 Ma, which implies that there s
continuous evolution of granitic magma from Haerlike and Kanggurtag in the north to the Central T
is found that plutonism has been interrupted by several extension events that occurred in the Eas
leozoic.The authors discusses the mineralization mechanisms and tectonic framework of porphyry co
of ductile shear belt type and silver deposits of tectonic alteration type in the Eastern Tianshan
mineralization model, which suggests the new direction in mineral prospecting in the Eastern Tian

Keywords:porphyry copper subduction zone tectonomagmatic evolution plate tectonic framework