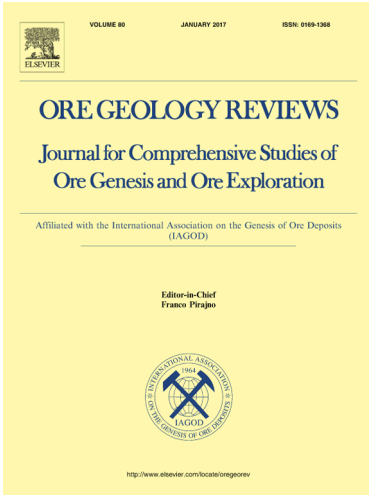

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PII: S0169-1368(17)30505-X
DOI: https://doi.org/10.1016/j.oregeorev.2017.10.025
Reference: OREGEO 2384

Received Date: 2 July 2017
Revised Date: 23 October 2017
Accepted Date: 28 October 2017

Please cite this article as: Geology, geochronology, geochemical characteristics and origin of Baomai porphyry Cu (Mo) deposit, Yulong Belt, Tibet, *Ore Geology Reviews* (2017), doi: https://doi.org/10.1016/j.oregeorev.2017.10.025

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Abstract

The Baomai porphyry Cu-Mo deposit is a newly discovered deposit located in the northern section of the Yulong porphyry Cu belt, eastern Tibet. It is associated with Eocene biotite monzogranite intrusions that were emplaced into Paleoproterozoic Ningduo Group and Middle-Upper Triassic sedimentary rocks. A biotite monzogranite porphyry with a zircon U-Pb age of 42.7 Ma was intruded by several post-ore diorite porphyry dikes (ca. 37.8 Ma). Alteration mineral assemblages consistent with argillic, phyllic, and hornfels were identified in ore-bearing porphyries and host rocks at Baomai. Argillic and phyllic alteration assemblages are spatially related to high-grade Cu and Mo mineralization, whereas hornfels alteration is accompanied by weak Cu mineralization. Molybdenite from the mineralized porphyry returned a Re-Os isochron age of 42.6Ma, and