Accepted Manuscript

The geochemistry, U-Pb and Re-Os geochronology, and Hf isotopic constraints on the genesis of the Huangjiagou Mo deposit and related granite in the Dabie region, Hubei Province, China

Qi-Zhi Chen, Shao-Yong Jiang, Rui-Chun Duan

PII: S0169-1368(16)30422-X
DOI: doi: 10.1016/j.oregeorev.2016.07.009
Reference: OREGEO 1873

To appear in: *Ore Geology Reviews*

Received date: 19 February 2016
Revised date: 12 July 2016
Accepted date: 14 July 2016

Please cite this article as: Chen, Qi-Zhi, Jiang, Shao-Yong, Duan, Rui-Chun, The geochemistry, U-Pb and Re-Os geochronology, and Hf isotopic constraints on the genesis of the Huangjiagou Mo deposit and related granite in the Dabie region, Hubei Province, China, *Ore Geology Reviews* (2016), doi: 10.1016/j.oregeorev.2016.07.009

The geochemistry, U-Pb and Re-Os geochronology, and Hf isotopic constraints on the genesis of the Huangjiagou Mo deposit and related granite in the Dabie region, Hubei Province, China

Qi-Zhi Chen[a], Shao-Yong Jiang[a,b]*, Rui-Chun Duan[a,c]

[a] State Key Laboratory of Geological Processes and Mineral Resources, Faculty of Earth Resource, Collaborative Innovation Center for Exploration of Strategic Mineral Resources, China University of Geosciences, Wuhan 430074, China

[b] State Key Laboratory for Mineral Deposits Research, School of Earth Sciences and Engineering, Nanjing University, Nanjing 210093, China

[c] Wuhan Institute of Geology and Mineral Resources, China Geological Survey, Wuhan 430074, China

***Corresponding author: shyjiang@cug.edu.cn**

Abstract

In recent years, a number of Mo deposits have been discovered in the Dabie region of the Qingling-Dabie orogenic belt. These deposits have a genetic relationship with Late Jurassic to Early Cretaceous granites. In this study, we present a geochemical and geochronologic study on the recently found Huangjiagou Mo deposit, which is the first Mo deposit found in Hubei Province from the Dabie region. The Huangjiagou deposit is currently under exploration, and a middle-sized Mo deposit with 100,000 tonnes of proven Mo metal reserves has already been reached. Mo mineralization mainly occurs as small quartz-molybdenite veins and disseminations within the country rocks next to the Huangjiagou granite. Re-Os isotope dating of molybdenites