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## Origin of the Ni-Mo Polymetallic Sulfide Ores from the Lower Cambrian Black Shale Sequence, South China: Geological, Geochemical and Isotopic Evidences

JIANG Shaoyong<sup>1,2</sup>, PI Daohui<sup>1</sup>, YANG Jinghong<sup>2</sup> and WU Heping<sup>2</sup>

*1 State Key Laboratory of Geological Processes and Mineral Resources, Faculty of Earth Resources, China University of Geosciences, Wuhan 430074, China*

*2 State Key Laboratory for Mineral Deposits Research, Department of Earth Sciences, Nanjing University, Nanjing, 210093, China*

A Ni-Mo sulfide marker layer, several meters above the Precambrian/Cambrian boundary, occurs in the lowermost black shale sequence of the Lower Cambrian Niutitang Formation in South China. The origin and depositional environment of this highly metalliferous unit, in particular the enclosed Ni-Mo sulfide bed, have been hotly debated, with two major schools of genetic models proposed, one suggests the metals originated from primary Early Cambrian seawater and therefore the depositional environment of the metalliferous rocks record the Early Cambrian ocean chemistry, and the other suggests that the mineralization is genetically related to submarine hydrothermal event. This paper summarizes all available geological, geochemical, and isotopic evidences, in particular those from the authors published (see references 1-14) and unpublished data, to demonstrate that a syn-sedimentary hydrothermal fluid made great contribution to the abnormal metal enrichments in the early Cambrian ocean on the Yangtze Platform, South China.

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\* Corresponding author. E-mail: shyjiang@cug.edu.cn

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