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The Petrogenesis of Shijia Goldbearing Mafic Rocks in Guangxi. South China: Implications for Gold **Deposit Tectonic Background**

BAOHUA WANG^{1*}, XI-JUN LIU¹, WENLONG HUANG, SHUAI LIAO¹, YU SHI¹. YUAN SUN¹, JI-FENG XU¹ AND BIN XIONG¹

¹Guangxi Key Laboratory of Hidden Metallic Ore Deposits Exploration, Guilin University of Technology, Guilin, 541004. China

(*Correspondence author: wangbaohua@glut.edu.cn)

The Permian mafic rocks (e.g. diabase and basalt) are concentrated in the Shijia of western Guangxi, economically significant gold mineralizations are genetically associated with these mafic rocks. However, the causes of magmatism and related gold deposit background are controversial. Here, we firstly present the comprehensive major element, trace element data of Ore-bearing and barren mafic rocks, the geochemical characteristics of the bulk of mafic rocks showed a relative high TiO₂, which are similar to ocean island basalt (OIB) and Emeishan high Ti basalts. Their trace element concentration patterns enriched in REE, Nb and Ta, which was akin to those of the Emeishan flood basalts (Figure 1). On the Th/Yb and Ta/Yb trace element ratios co-variation diagram, Shijia mafic rocks plot in the OIB mantle array, indicate the mantle plume source contribution. Combine the Shijia region located in the outer zone of Emeishan flood-basalt province, we suggest the Shijiao gold-bearing mafic rocks were probably a product of mantle plume magmatism.



1.0 RbBaTh U NbTa LaCePbPr Sr NdZr Hf SmEuTi GdTbDy Y HoEr TmYbLu Figure 1. Primitive mantle-normalized incompatible element concentrations of Shijia mafic rocks.

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