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Breccias in the Lala IOCG Deposit, SW China

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1 Introduction

Breccias are important in IOCG deposits and host most of the mineralization in some typical deposits such as Olympic Dam, Ernest Henry and La Candelaria (Jébrak, 2009). The Lala IOCG deposit is the largest copper deposit in Sichuan Province, SW China (Zhu and Sun, 2013). The deposit is hosted by the Paleoproterozoic meta-volcano-sedimentary sequences of the Luodang Formation of the Hekou Group. Recently breccias have been discovered in the Lala deposit, but we know little about these breccias. In this contribution, I present preliminary field observation on breccias and discuss the genesis of breccias from the Lala deposit.

2 Breccias Description

Two types of breccias, including barren and mineralized breccias, have been discovered in the gallery from the Tianshengba ore block of the Lala deposit. The clasts are pink with low roundness and mainly consist of albite. The matrixes are black green and probably consist of biotite and chlorite. The clasts of barren breccias are coarser than that of mineralized breccias (Fig.1.). The chalcopyrite and pyrite replaced the matrixes in the mineralized breccias.

3 Genesis of Breccias

Breccia genesis has been well hypothesized by Sillitoe (1985) and Jébrak (2009). As mentioned above, the breccias are hydrothermal at the Lala deposit and other IOCG deposits worldwide. The processes that formed the breccias are ground preparation for late sulfide deposition. More study should be carried on the breccias of the Lala deposit.

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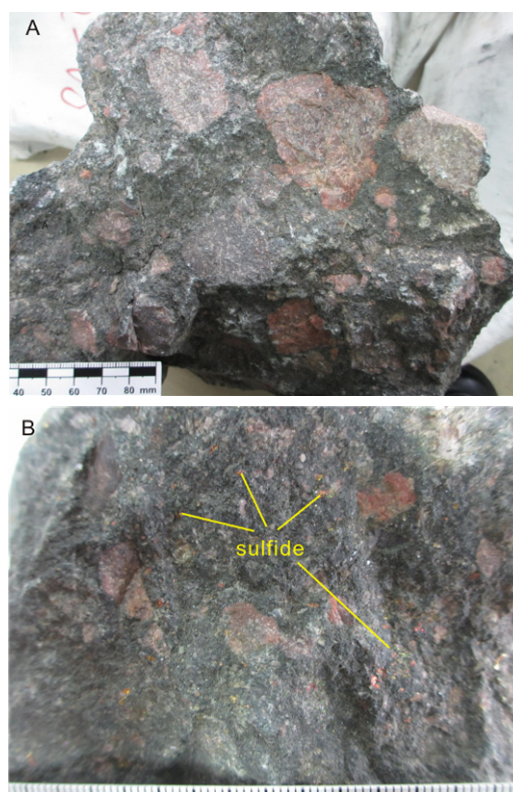


Fig. 1. Barren (A) and mineralized (B) breccias samples from the Lala deposit.

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