Geological and Tectonic Setting of Monywa-Popa Volcanic Belt, Central Myanmar: Preliminary Outcomes of Geochemical and Geochronological Results

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The Monywa-Popa volcanic belt is situated in central Myanmar, from Kachin State in north to Pegu Yoma in south, through Monywa at which hosts the largest high-sulphidation copper resource in the country. The belt is generally characterised by young Tertiary-Quatarnary volcanic rocks that are patchy and consistently occurred along the belt. The volcanic rocks are mainly mafic to intermediate compositions with high-K to calc-alkaline geochemical signatures (Stephenson and Marshall, 1984). The young volcanic rocks overlie the older basement rocks which are mainly composed of Crataceous igneous and metamorphic rocks (e.g., United Nations, 1978). Due to poor accessibility to the area, little study has been done and the geological and tectonic significances of the belt have been under-researched in the last few decades.

In this study, we re-evaluated the geological and tectonic setting of the Monywa-Popa belt based on geological, geochemical and geochronological data that are previously published (e.g., United Nations, 1978; Khin Zaw, 1990; Mitchell et al., 2008) incorporating our new preliminary data. The data suggest that the formation of the mineralised Monywa-Popa volcanic belt is related to eastward subduction of micro-continent (microplate) at the west of Myanmar in the Bay of Bengal. This subduction zone also runs south through to the west of Sumatra and currently active and has recently inflicted major tsunami in the region.

Keywords; Monywa-Popa volcanic belt, Monywa, High-sulphidation copper, Myanmar

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