



Soil geochemical characteristics of the copper mineralized zone of the Tamadue area, central Sulawesi, Indonesia

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According to the results of stream sediment geochemical survey on Wuasa district in Central Sulawesi, Indonesia, follow-up soil geochemical survey was applied to the anomalous area which was selected by the before described the stream sediment geochemical survey.

The geology of the survey area consists of Cretaceous Pampangoe Metamorphic Complex which is composed of schist, granite gneiss, slate, phyllite and Cretaceous Lati-mojong Formation of volcanic rocks, granite gneiss, slate, and Tertiary andesite and granite. The most of the survey area is occupied by Tertiary andesite and andesitic basalt.

The zones of "A" and "B-1" in the survey area were selected for Cu and Ni promising sites which are based on the comparison and interpretation of the response ratios of mobile metal ions, the contrastive images of elemental distributions and factor analysis for the patterns of the spatial distribution of the associated metallic elements.

Promising zone "B-1" covered by 0.015 Km² in the northern central part of the survey area shows four times of the response ratios of Ni contents. The Cu promising zone "A" is about 1.4 Km² where there are the anomalous area of the five times response ratios of Cu and showing the Cu distribution over the 767 ppm of the maximum threshold. The soil samples containing over 100 ppm of Cu up to 0.36 % are concentrated in promising zone "A" which are amounted to 20 % of the total soil samples.

The most interesting zone of the current survey area is a promising zone "A" where is dominated by positive anomalies in the geochemical cross sections of Cu, As, Sb, Bi

elements. These associations are also supported by the idea of possible Cu mineralization on the promising zone "A" and its extended northern part.