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Preliminary study of the copper mineralization in the Sabe Taung Area, Central Myanmar.

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The Sabe Taung area lies about 50 km southeast from Mandalay in central Myanmar. The copper mineralization is hosted within the Mogok-Mandalay-Mergui (MMM) Belt. The MMM Belt is famous for abundance of tin, tungsten and gold mineralization [1], but in the district, some local companies has started their production for copper. However, previous study for the area is extremely limited. In order to give scientific interpretation of the mineralization to the district will be a great contribution to economic growth and the development of mining industry of Myanmar.

The copper mineralization in Sabe Taung area was reported as skarn type deposit because limestone is dominant in the district [2]. However, the field work conducted in this study revealed that any skarn minerals cannot be observed in the tunnel or surface outcrop in this area. The ore minerals observed were mainly chalcopyrite, pyrite and malachite associated with vein system. The width of the vein was averagely 1 meter and the vein has trend of N-S direction with almost vertical dipping. Some alteration minerals can be recognized in the host rock.

Based on petrographic and mineralogical analysis, chalcopyrite, pyrite sphalerite, covellite and arsenopyrite as ore minerals are identified. In this study, 6 vein systems are recognized in the tunnel No. 3, and give vein systems number 1 to 6 from west to east as shown in figure 1. Vein systems 1, 2 and 6 have pyrite but copper mineralization cannot be confirmed there. However vein system 3, 4 and 5 contain copper and its average grade of copper is 1.6% with the maximum 2.7% copper in vein 3. Only the vein system shows chloritization and similar chloritization is also observed in the tunnel locating 1.5 km north from tunnel 3. Thus, the copper mineralization zone extends at least over 1.5 km along the N-S trend. The existence of covellite in the vein 5 which contain 1.7% of copper, suggests that the mineralization temperature is relatively high. The high concentration of zinc, arsenic and antimony is confirmed in the same vein. Therefore, those mineralization is closely associated with copper mineralization and the further study will be focusing on the understanding the formation condition and mechanism of copper mineralization in this area.

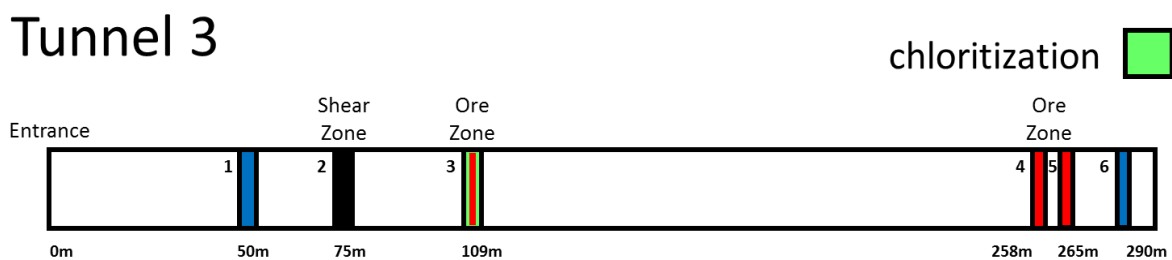


Figure 1: Cross section of the tunnel 3 showing vein system locations.

References:

[1] N. J. Gardiner, L. J. Robb and M. P. Searle (2014) in: Applied Earth Science (Trans. Inst. Min. Metall. B) 2014 VOL 123 NO 1.

[2] K. Oo (2013) Personal communication.

