Skarn Mineralization in the Masara Gold District, Eastern Mindanao, Philippines

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The Masara Gold District is located in Eastern Mindanao, Philippines. Three mineralization styles are identified in the district: the major epithermal gold-silver mineralization currently being exploited by Apex Mining Co. Inc. (AMCI), the porphyry copper-gold mineralization prospects and reported minor skarn mineralization. However, no detailed studies have been conducted on the skarn deposit and its mineralization style and characteristics, as well as the specific skarn type. This study aims to characterize and provide information on the sulfide mineralogy and paragenesis of the skarn mineralization in the Masara Gold District from detailed investigation of drill cores and underground exposures.

Initial findings of the study revealed that the calcic skarn deposit in the Masara Gold District is hosted in the Eocene Masara Formation volcaniclastic wall rock. Various overprinting of skarn zones is observed between the identified garnet-pyroxene skarn, epidote skarn and magnetite skarn. The massive garnet-pyroxene skarn is typified by dark red garnet and light green pyroxene minerals. The magnetite zone is dominantly composed of magnetite occurring as veins and massive disseminations which cut the earlier-formed garnet and pyroxene minerals. Sulfides present in this zone are pyrite and chalcopyrite, with minor sphalerite, galena, ilmenite and hematite. The epidote skarn consists mainly of retrograde yellow-green epidote overprinting the garnet-pyroxene and magnetite skarn zones. White marble is also observed containing fractures filled with dark gray Fe-Mn oxide coatings representing distal alteration of fluid escape structures. Thin garnet veins from the massive skarn are also filling the fractures. The skarn zones are being cut by the Middle Miocene Alipao Andesite.

Based from the mineralogy and dominant sulfides present, the skarn deposit in the Masara Gold District is a calcic Fe-Cu skarn.