

ADULARIA-SERICITE TYPE EPITHERMAL GOLD MINERALIZATION IN SIBUTAD, ZAMBOANGA DEL NORTE, MINDANAO, PHILIPPINES

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Gold-bearing quartz vein systems occur in the Dapitan-Sibutad-Rizal area, Zamboanga del Norte. Two ore bodies and at least seven prospects are distributed in an approximately 3km x 9km alteration halo. These ore bodies and prospects are hosted in Pliocene to Quaternary volcanic rocks sequence, referred here as Malindang Volcanics. Reconnaissance mapping by this study in the Dapitan-Sibutad-Rizal area showed a volcanic rock sequence ranging from massive andesite lava flow at the bottom, followed by agglomerate and pyroclastic rock/tuff sequence. The latest volcanic unit is the volcanoclastic rocks composed of basaltic agglomerate and volcanic breccia. Other features in the Sibutad area are the hydrothermal breccia and silica sinter deposits. Widespread hydrothermal wallrock alteration noted in the Dapitan-Sibutad-Rizal area is characterized by the abundance of silica and clay minerals. Accessory minerals include chlorite, epidote, hematite, calcite, and barite. Quartz generally occurs as subparallel to interconnected veins/veinlets. Silicification is commonly in the form of chalcedonic replacement and open-space filling, ranging in texture from drusy to comb structure to crustiform. Clay alteration ranges from kaolinitic to sericitic. Sulphides identified in the pit, road outcrops and drillcores include chalcopryite, bornite, covellite, sphalerite, galena, malachite and pyrite. Combination of several features exhibited in the Sibutad deposit, particularly volcanic setting, widespread clay alteration, presence of indicator minerals, formation of silica sinter deposit and geometry and textural varieties in cavity-filling, gold-bearing quartz veins point to a relatively low-sulphur, reduced depositional condition - a setting most commonly identified with adularia-sericite epithermal gold deposit