

## **Mineralization styles and spatial distributions of gold deposits in Western Java, Indonesia**

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Present Indonesian Island is located at the intersection of the three geotectonic mega plates of Eurasian; Indian-Australian; and Pacific plates. The collisions of these plates resulted in several magmatic belts along the subducted region. Western Java is part of Sunda Banda magmatic belt. This belt is well known as several gold copper deposits in Indonesia are located within this belt.

Gold production from Western Java has been known since Dutch era, where gold was mined from Cikotok-Cirotan gold deposits. After that period, gold was extracted from Cikidang gold mining. At present gold is produced from Gunung Pongkor and Cibaliung gold mines. Several others deposits are under exploration programs.

The gold mineralization in Western Java is typical of epithermal type deposit and hosted by Tertiary volcanic rocks. The gold deposits are extensively in the form of gold bearing quartz veins that classified as epithermal low sulphidation; intermediate sulphidation and high sulphidation. The low sulphidation epithermal system is characterized by metal content of gold and silver associated with adularia, manganese oxide and (+/- sericite, carbonate). While intermediate sulphidation is characterized by cockade breccia texture and polymetallic mineral contents mainly gold, silver and significant chalcopyrite, lead, zinc, and rare bismuth, wolframite, cassiterite and tellurium minerals contents. The high sulphidation is characterized by massive-vuggy quartz texture and gold associated with enargite-tenantite.

. The mineralization ages obtained from K-Ar and Ar/Ar dating (Pongkor 2.7 Ma, Cikidang 2.4 Ma, Cirotan 1.7 Ma, Cibaliung 11 Ma, Arinem 8.8-9.4 Ma, and Cineam-Citambal 8.5 Ma) indicate a slightly shifting of volcanic front in Java Island.

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