

Refractory gold ore characteristics from Central Gold Belt Malaysia

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Abstract: More than 90 % of gold in Malaysia was mined from Central Gold Belt, and it was the main role to lead the country's economy. The Selinsing Gold Mine Manager, Pejom Gold Mine, Ulu Sokor Gold Mine, Kanan Kerbau Gold Mine and Raub Gold Mine are some of the important gold mines at the Central Gold Belt. Gold mineralization in Central Gold Belt is dominated by gold, and it exists in quartz lode and stockwork deposits. In this study, the gold ore samples were taken from three different locations in Selinsing Gold Mine Manager. Thorough mineral characterization studies were done by using ore microscope, Scanning Electron Microscope equipped with Energy-dispersive X-ray spectroscopy (SEM/EDX), X-ray diffraction (XRD) and X-ray fluorescence (XRF). Through this analysis, it was found that gold mineralization in Selinsing gold mine were found in both "visible" and "invisible" gold which is associated with quartz veins and sulfide minerals. The presence of gold was formed as free milling gold in size of 130 μ m diameter, while stibnite, chalcopyrite and pyrite appeared as major components. However, gold is also found as solid solution component and bearing with sulfide minerals, such as stibnite, arsenopyrite, chalcopyrite, sphalerite, galena and pyrite.

Keywords: Refractory gold ore, Central Gold Belt, gold mineralization, visible gold, invisible gold