

# **Buffalo Reef Mesothermal Gold Mineralization Mineralogy and Geochemistry in Kuala Lipis, Pahang, Malaysia**

## **Abstract**

In Pahang, the East Coast of Peninsular Malaysia, Buffalo Reef remains active as a gold mine among the main gold deposits at the North of Selinsing Gold Mine. Mineralization of gold is possible when stibnite occurs in quartz veins. The main purpose of this study is to examine the geological condition governing the mineralization of ore and the origin of gold mineralization of Buffalo Reef. The XRD result shows the quartz stage (SiO<sub>2</sub>) while quartz, sillimanite and stibnite are identified. Ten samples were tested with XRF geochemical studies showing SiO<sub>2</sub> contents of 24.98–70.67 wt%, and the overall Na<sub>2</sub>O + K<sub>2</sub>O diagram versus SiO<sub>2</sub> alkaline diagram showed varies basaltic andesite, andesite and dacite series with favourable and random distribution. The deposits region consists of the thick Permian rock sequences especially tuff volcanic rock that is intertwined by clay (argillite, phyllite) and carbonate rocks. Mineralization of volcanic rock and pyroclastic tuff supporting and regulating the orogenic gold deposit under the Raub–Bentong framework. The region epizoic and mesonic with a mesothermal deposit characterized by the presence of gold, stibnite and arsenopyrite with the grade of gold is 4.01 g/t Au from AAS.

## **Keywords**

Buffalo reef; Deposit; Gold; Mineralization