

SARI

Daerah Tambang Sawah secara administratif terletak di Kecamatan Lebong Utara dan Kecamatan Pinang Belapis, Kabupaten Lebong, Provinsi Bengkulu dan secara fisiografis terletak pada pegunungan bukit barisan Sumatra tengah yang disusun oleh batuan beku busur magmatik Sunda – Banda. Tambang Sawah merupakan lokasi yang memiliki potensi mineralisasi emas tipe epitermal sulfidasi rendah dan belum banyak penelitian detail di lokasi ini. Penelitian ini bertujuan untuk mengetahui kondisi geologi yang mengontrol mineralisasi dan karakteristik endapan emas tipe epitermal melalui kegiatan pemetaan geologi, anomali geofisika berdasarkan data magnetik dan IP (*Induced Polarization*), analisis petrografi batuan penyusun lokasi penelitian, mikroskopi bijih, analisis XRD dan karakteristik geokimia mineral bijih dengan analisis FA-AAS dan ICP-MS. Mineralisasi emas di Tambang Sawah merupakan mineralisasi pada endapan vulkano-tektonik yang disusun oleh litologi intrusi batuan granit terhadap batuan breksi andesit, dengan struktur geologi pengontrol mineralisasi berupa kekar, breksiasi, *dike*, dan sesar, yaitu sesar Ketahun yang membentuk zona rekahan dan tarikan, sehingga struktur yang ditemukan berupa urat-urat kuarsa. Alterasi hidrotermal yang muncul di lokasi penelitian merupakan jenis alterasi tipikal yang ditemukan pada endapan emas epitermal yakni, argilik, silisifikasi dan propilitik. Mineral sulfida penanda endapan emas tipe epitermal sulfidasi rendah yang dijumpai yakni, pirit, kalkopirit, kovelit, sfalerit dan galena. Emas diinterpretasikan berasal dari pengendapan mineral sulfida dan pengendapan urat kuarsa. Berdasarkan hasil analisis geokimia emas berkolerasi positif dengan unsur Ag, Cu, Pb, Zn As, dan Sb serta berkolerasi negatif dengan unsur Hg. Berdasarkan hasil peta kontur sebaran anomali total magnetik, mengindikasikan daerah yang prospek adanya mineralisasi emas epitermal sulfidasi rendah pola anomali cenderung rendah, (10,6 nT – 275,6 nT). Zona mineralisasi tinggi emas memiliki rentang nilai resistivitas $>700 \Omega.m$ dan *chargeability* >300 ms. Material pembawa emas diduga pada kedalaman yang beragam dengan nilai resistivitas $176 \Omega.m - 720 \Omega.m$ dan nilai *chargeability* 300 ms – 583 ms dan zona tinggi mineralisasi emas (*high Chargeability* dan *high resistivity*) pada kedalaman ± 75 meter.

Kata Kunci: Tambang Sawah; mineralisasi; Emas Epitermal Sulfidasi rendah, magnetik; *Induced Polarization*; Lebong Utara; Bengkulu; Sumatra.

ABSTRACT

Tambang Sawah is administratively located in North Lebong District and Pinang Belapis District, Lebong Regency, Bengkulu Province and is physiographically located in the hill ranges of Central Sumatra which are composed of igneous rocks of the Sunda – Banda magmatic arc. Tambang Sawah is a location that has the potential for low sulfidation epithermal gold mineralization and there has not been much detailed research at this location. This study aims to determine the geological conditions that control the mineralization and characteristics of epithermal gold deposits through geological mapping, geophysical anomalies based on magnetic and IP (Induced Polarization) data, petrographic analysis of the rocks that make up the study site, ore microscopy, XRD analysis and geochemical characteristics of ore minerals with FA-AAS and ICP-MS analysis. Gold mineralization in the Tambang Sawah is a volcanic-tectonic deposit composed of intrusive lithology of granite against andesite breccia rocks, with geological structures controlling mineralization in the form of joints, breccias, dikes, and faults, namely the Ketahun fault which forms a fracture and tension zone, so that the structure found is only quartz veins. Hydrothermal alteration that appears at the study site is a typical type of alteration found in epithermal gold deposits, namely, argillic, silicification and propylitic. The sulphide minerals that indicate low sulfidation epithermal gold deposits were found were pyrite, chalcopyrite, covelite, sphalerite and galena. Gold is interpreted as originating from the deposition of sulfide minerals and the deposition of quartz veins. Based on the results of geochemical analysis, gold is positively correlated with the elements Ag, Cu, Pb, Zn, As, and Sb, negatively correlated with the elements Hg. Based on the results of the contour map of the total magnetic anomaly distribution, it indicates that the prospect of low sulfidation epithermal gold mineralization tends to be low, (10,6 nT – 275,6 nT). The high gold mineralized zone has a resistivity value range of >700 $\Omega.m$ and a chargeability of >300 ms. Gold carrier material is suspected at various depths with resistivity values of 176 $\Omega.m$ – 720 $\Omega.m$ and chargeability values of 300 ms – 583 ms and zones of high gold mineralization (high chargeability and high resistivity) at depths ± 75 .

Keywords: *Tambang Sawah; mineralization; low sulfidation epithermal gold; magnetic; Induced Polarization; North Lebong; Bengkulu; Sumatra.*