

SARI

Deposit Nam Salu di Kecamatan Kelapa Kampit, merupakan salah satu deposit penghasil timah terbesar yang pernah ada di Indonesia. Area sekitar deposit tersebut diyakini masih memiliki potensi mineralisasi timah, sehingga perlu dilakukan eksplorasi guna memastikan potensi tersebut. Area penelitian merupakan wilayah IUP PT Menara Cipta Mulia yang berada di Desa Mentawak, Senyubuk dan Mayang, Kecamatan Kelapa Kampit, Kabupaten Belitung Timur. Tujuan utama dari penelitian ini adalah untuk mengetahui kondisi geologi, alterasi dan mineralisasi endapan timah primer yang ada di area penelitian. Data penelitian dikumpulkan melalui studi penelitian terdahulu dan pemetaan lapangan. Metode analisis yang digunakan meliputi analisis petrografi, mineragrafi, *X-Ray Diffraction* (XRD), dan *Inductively Coupled Plasma – Optical Emission Spectroscopy* (ICP-OES). Hasil analisis menunjukkan bahwa litologi di area penelitian terbagi menjadi satuan metabatulanau, metabatupasir, dan endapan pasir kerikilan. Satuan metabatulanau dan metabatupasir berperan menjadi *host rock*, sedangkan *source rock* dari mineralisasi tidak ditemukan. Struktur geologi yang berkembang berupa kekar gerus, sesar geser, dan sesar turun. Struktur yang menjadi *feeder zone* utama dari mineralisasi merupakan perpotongan antara sesar geser sinistral Nam Salu dan sesar turun Senyubuk. Alterasi yang berkembang di daerah penelitian berupa alterasi silisifikasi (kuarsa, ilit $\pm$ klorit) dan argilisasi (kaolinit, ilit $\pm$ monmorilonit). Mineralisasi yang berkembang berupa urat dengan tipe urat meliputi urat magnetit, sulfida, oksida besi, dan kuarsa. Berdasarkan hasil ICP-OES, kandungan timah (Sn) di area dekat Nam Salu memiliki kadar yang cukup tinggi. Mineralisasi unsur timah di daerah penelitian berasosiasi dengan unsur Cu dan Ag. Tipe endapan yang berkembang berupa endapan hidrotermal dominasi pengisian urat sederhana dan juga tipe endapan breksi tektonik.

Kata kunci: mineralisasi, timah primer, struktur geologi, Kelapa Kampit, Nam Salu

ABSTRACT

Nam Salu deposit in the Kelapa Kampit District is one of the largest tin-producing deposits ever found in Indonesia. The surrounding area of the deposit is believed to still have potential tin mineralization, so exploration needs to be carried out to confirm this potential. The research area is within the IUP (Mining Business License) of PT Menara Cipta Mulia, located in the villages of Mentawak, Senyubuk, and Mayang in the Kelapa Kampit District, East Belitung Regency. The main objective of this study is to understand the geological conditions, alteration, and mineralization of the primary tin deposits in the research area. Research data were collected through previous studies and field mapping. The analytical methods used include petrographic, ore microscopy, X-Ray Diffraction (XRD), and Inductively Coupled Plasma – Optical Emission Spectroscopy (ICP-OES) analysis. The analysis results indicate that the lithology in the research area is divided into metasiltstone, metasandstone, and gravel sand deposits units. Metasiltstone and metasandstone units act as the host rocks, while the mineralization source rocks were not found. The geological structures that have developed include shear fractures, strike-slip faults, and normal faults. The primary feeder zone for mineralization is the intersection between the Nam Salu sinistral strike-slip fault and the Senyubuk normal fault. Alteration observed in the study area consists of silicification alteration (quartz, illite $\pm$ chlorite) and argillic alteration (kaolinite, illite $\pm$ montmorillonite). Mineralization occurs in the form of veins, with vein types including magnetite, sulfide, iron oxide, and quartz veins. Based on ICP-OES results, tin (Sn) content in the area near Nam Salu shows a relatively high concentration. Tin mineralization in the study area is associated with Cu and Ag elements. The deposit types developed include simple veins infilling-dominated hydrothermal deposits and tectonic breccia deposit.

Keywords: mineralization, primary tin, geological structure, Kelapa Kampit, Nam Salu