

SARI

Salah satu endapan timah primer yang dijumpai di Pulau Belitung berada di Kelapa Kampit yang termasuk bagian dari jalur sabuk timah Asia Tenggara. Kegiatan eksplorasi lanjut di sekitar deposit tersebut dilakukan untuk mengetahui potensi mineralisasi timah primer. Lokasi penelitian termasuk dalam wilayah IUP PT Menara Cipta Mulia yang terletak di Desa Mayang dan Air Kelik, Kecamatan Kelapa Kampit, Kabupaten Belitung Timur, Provinsi Bangka Belitung. Tujuan dari penelitian ini adalah mengetahui kondisi geologi, tipe alterasi hidrotermal, karakteristik mineralisasi timah primer serta model genetik timah primer di lokasi penelitian. Penelitian ini dilakukan dengan metode pemetaan lapangan yang kemudian dilanjutkan dengan analisa laboratorium berupa analisis petrografi, mineragrafi, XRD, dan ICP-OES. Hasil penelitian menunjukkan daerah penelitian tersusun oleh metabatulanau, metabatupasir, dan endapan pasir kerikilan. Litologi metabatulanau dan metabatupasir berperan sebagai batuan termineralisasi (*host rock*). Struktur geologi di daerah penelitian terdiri atas kekar dan sesar. Struktur geologi berperan membentuk urat-urat yang berkembang di daerah penelitian. Perpotongan antara sesar turun Senyubuk dengan sesar geser dekstral Senyubuk merupakan *feeder zone* utama fluida hidrotermal dari daerah penelitian. Zona alterasi yang berkembang di daerah penelitian yaitu alterasi silisifikasi (kuarsa \pm ilit \pm klorit \pm kristobalit) dan alterasi argilisasi (ilit \pm kaolinit \pm smektit \pm haloisit). Mineralisasi timah primer di daerah penelitian dijumpai dalam bentuk urat-urat. Mineral logam terbentuk pada fase hipogen berupa magnetit, kasiterit, pirit, kalkopirit, bornit, stanit, sfalerit, argentit, arsenopirit, dan galena. Mineral logam terbentuk pada fase supergen berupa kovelit, massicot, hematit, dan gutit. Kadar timah (Sn) yang teridentifikasi terdapat pada urat magnetit-sulfida dengan kadar 116 ppm dan pada urat sulfida dengan kadar 39 ppm. Terdapat anomali kadar Cu dan Ag pada urat magnetit-sulfida dengan kadar Cu >10000 ppm dan kadar Ag 103 ppm. Mineralisasi timah primer di daerah penelitian memiliki tipe endapan berupa tipe endapan dominasi pengisian berupa urat sederhana yang berada di level dangkal yang berasal dari granit pembawa timah pada level yang lebih dalam.

Kata kunci: Mineralisasi, Timah primer, Kelapa Kampit, Sistem urat

ABSTRACT

One of the primary tin deposits found on Belitung Island is located in Kelapa Kampit, which is part of the Southeast Asia tin belt. Further exploration activities around this deposit are being carried out to determine the potential for primary tin mineralization. The research location located within the area of the Mining Business License (IUP) of PT Menara Cipta Mulia, located in the villages of Mayang and Air Kelik, Kelapa Kampit District, East Belitung Regency, Bangka Belitung Province. The objective of this study is to understand the geological conditions, types of hydrothermal alteration, characteristics of primary tin mineralization, and the genetic model of primary tin in the research area. The study is conducted using field mapping methods followed by laboratory analysis including petrographic, mineralogical, XRD, and ICP-OES analyses. The research results indicate that the study area is composed of metasiltstone, metasandstone, and gravel sand deposits. Metasiltstone and metasandstone lithologies serve as host rocks for mineralization. Geological structures in the study area consist of faults and fractures, which play a role in forming veins that develop in the research area. The intersection of the Senyubuk normal fault with the Senyubuk dextral strike-slip fault is the main feeder zone for hydrothermal fluids in the research area. The developed alteration zones in the research area include silicification alteration (quartz + illite + chlorite + cristobalite) and argillization alteration (illite + kaolinite + smectite + halloysite). Primary tin mineralization in the research area is found in vein form. Metallic minerals formed during the hypogene phase include magnetite, cassiterite, pyrite, chalcopyrite, bornite, stannite, sphalerite, argentite, arsenopyrite, and galena. Metallic minerals formed during the supergene phase include covellite, massicot, hematite, and goethite. The identified tin (Sn) content is 116 ppm in magnetite-sulfide veins and 39 ppm in sulfide veins.. There are anomalies of copper (Cu) and silver (Ag) content in magnetite-sulfide veins, with Cu content >10000 ppm and Ag content of 103 ppm. Primary tin mineralization in the research area exhibits a deposit type dominated by simple vein fillings at shallow levels originating from tin-bearing granite at deeper levels.

Keywords : Mineralization, Primary tin, Kelapa Kampit, Vein system