

SARI

STUDI GEOLOGI, ALTERASI, DAN MINERALISASI ENDAPAN TIMAH PRIMER DAERAH CUNGFO DAN SEKITARNYA, KABUPATEN BANGKA, PROVINSI KEPULAUAN BANGKA BELITUNG

Indonesia merupakan negara penghasil timah terbesar di dunia setelah Cina. Indonesia berada di jalur Sabuk Timah Asia Tenggara yang tersebar di Pulau Karimun, Kundur, Singkep, Sumatra, Bangka Belitung, hingga bagian barat Pulau Kalimantan. Kebutuhan timah dalam industri berat maupun industri sehari-hari sangat tinggi. Maka dari itu untuk mendukung target produksi timah setiap tahunnya, perlu melakukan pengembangan-pengembangan lapangan yang telah ada dengan memadukan sebanyak-banyaknya analisis agar mendapatkan informasi akurat mengenai studi potensi endapan timah primer. Lokasi penelitian berada di Daerah Cungfo, Kecamatan Bakam, Kabupaten Bangka, Provinsi Kepulauan Bangka Belitung. Daerah penelitian memiliki luas 20 Km² (4x5 km). Penelitian ini bertujuan untuk mengetahui karakteristik endapan timah primer dengan meninjau aspek geologi, alterasi, dan mineralisasi. Metode yang digunakan pemetaan geologi berupa *grid mapping* dengan jarak pengambilan sampel 200 meter. Sampel yang diambil berupa *outcrop*, *soil*, dan/atau *float*. Untuk teknik pengambilan sampel dapat berupa *soil sampling*, *rockchip sampling*, dan *grab sampling*. Analisis laboratorium yang dilakukan meliputi *X-Ray Fluorescence* (XRF) *Portable*, *X-Ray Diffraction* (XRD), petrografi, dan minerografi. Stratigrafi daerah penelitian dari umur yang paling tua ke muda yaitu Satuan Sekis Mika (Karbon-Permian), Satuan Batupasir (Trias Awal-Trias Tengah), dan Satuan Granit (Trias Akhir-Jura Awal). Himpunan mineral alterasi berdasarkan pengamatan lapangan dan analisis XRD yaitu Zona Kuarsa + Kaolinit + Illit ± Smektit ± Dickit, Zona Kuarsa + Albit + Mikroklin ± Muskovit, Zona Kuarsa + Muskovit ± Serisit. Endapan timah primer hadir dalam pola mineralisasi sistem endapan urat yang nilai kadar tertingginya 2.505 ppm. Alterasi dan mineralisasi pada daerah penelitian dikontrol oleh litologi dan struktur geologi dengan deformasi fase pertama yang arahnya barat laut-tenggara. Tipe endapan pada lokasi penelitian adalah Tipe Endapan Greisen Dalam dengan fase pengendapan urat.

Kata Kunci : *Cungfo, Endapan Timah Primer, Geologi, Alterasi, Mineralisasi.*

ABSTRACT

GEOLOGY, ALTERATION, AND MINERALIZATION OF PRIMARY TIN DEPOSIT IN CUNGFO AND SURROUNDING AREAS, BANGKA REGENCY, BANGKA BELITUNG ISLANDS PROVINCE

Indonesia is the largest producer of tin deposits in the world after China. Indonesia is located in the Southeast Asia Tin Belt route which is spread across the islands of Karimun, Kundur, Singkep, Sumatra, Bangka Belitung, to the western part of Kalimantan Island. Heavy industry and daily industry require a high demand for tin. Therefore, to support tin production target, it is necessary to carry out field developments that already exist combining as many analysis as possible in order to obtain accurate information regarding the potential study of primary tin deposits. The research location in the Cungfo Region, Bakam District, Bangka Regency, Bangka Belitung Islands Province. The research area has an area of 20 Km² (4x5 Km). This study aims to determine the characteristics of primary tin deposits by reviewing the aspects of geology, alteration, and mineralization. The method used for geological mapping is grid mapping with a sampling distance of 200 meters. The samples taken are in the form of outcrop, soil, and/or float. For sampling techniques can be in the form of soil sampling, rockchip sampling, and grab sampling. Laboratory analysis carried out are Portable X-Ray Fluorescence (XRF), X-Ray Diffraction (XRD), petrography, and mineragraphy. The stratigraphy of the study area from oldest to youngest are the Mica Schist Unit (Carbon-Permian), Sandstone Unit (Early Triassic-Middle Triassic), and Granite Unit (Late Triassic-Early Jurassic). Alteration mineral assemblages based on field observations and XRD analysis are Quartz + Kaolinite + Illite ± Smectite ± Dickite Zone, Quartz + Albite + Microcline ± Muscovite Zone, Quartz + Muscovite ± Sericite Zone. Primary tin deposits are present in the mineralization pattern of the vein deposit system with the highest grade value of 2.505 ppm. Alteration and mineralization in the study area are controlled by lithology and geological structure with the first phase deformation heading northwest-southeast. The type of tin deposit model is endo-greisen deposit with a vein depositional phase.

Keywords : Cungfo, Primary Tin Deposit, Geology, Alteration, Mineralization.