

# Studi karakteristik mineralisasi timah primer menggunakan analisis XRD, XRF, petrografi, dan mineragrafi di Parit Tiga, Kabupaten Bangka Barat, Kepulauan Bangka Belitung = Study of characteristics of primary tin mineralization using XRD, XRF, petrographic, and mineragraphic analysis in Parit Tiga, West Bangka Regency, Bangka Belitung Islands

Disa Kurnia Dewi, author

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## Abstrak

Aktivitas pertambangan timah sudah dilakukan sejak tahun 1976 oleh PT Timah Tbk sehingga semakin sedikit sumber timah yang diketahui. Penelitian ini bertujuan untuk menentukan karakteristik mineralisasi timah primer di Parit Tiga, Kabupaten Bangka Barat, Kepulauan Bangka Belitung. Metode yang digunakan pada penelitian ini, yaitu XRD, XRF, Petrografi, dan Mineragrafi. Berdasarkan hasil analisis yang telah dilakukan, daerah penelitian terdiri atas dua satuan geomorfologi yang meliputi Satuan Perbukitan Vulkanik dan Satuan Tailing Antropogenik. Berdasarkan hasil interpretasi persebaran litologi di daerah penelitian, maka daerah penelitian memiliki dua satuan batuan, antara lain Satuan Granit Klabat Berbutir Halus dan Satuan Granit Klabat Berbutir Sedang-Kasar. Lalu, struktur yang berkembang di daerah penelitian adalah Sesar Mendatar Mengiri Turun dan *sheeted vein/veinlet*. Kemudian, alterasi yang berkembang di daerah penelitian terdiri dari empat fasies, yaitu Alterasi Kuarsa + Turmalin (104.2 ppm), Alterasi Kuarsa + Halosit + Klorit + Pirofilit (56.5 ppm), Alterasi Kuarsa + *Illite* (52.4 pm), dan Alterasi Kuarsa + Kaolinit + Klorit + *Dickite* (19.5 ppm). Endapan bijih yang ditemukan di daerah penelitian, yaitu kasiterit, hematit, dan pirit. Tipe endapan timah di daerah penelitian adalah greisen dan berada pada kontak antara batuan silikat dan batuan granit. Mineralisasi timah primer di daerah penelitian berkaitan dengan sesar, urat-urat, dan alterasi.

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Tin mining activities have been carried out since 1976 by PT Timah Tbk so that fewer sources of tin are known. This study aims to determine the characteristics of primary tin mineralization in Parit Tiga, West Bangka Regency, Bangka Belitung Islands. The methods which I used in this study are XRD, XRF, Petrography, and Mineragraphy. Based on the results of the analysis that had been done, the study area consists of two geomorphological units which include the Volcanic Hills Unit and the Anthropogenic Tailings Unit. Based on the interpretation of lithology distribution in the study area, there are two rock units, which are the Fine-Grained Granite Klabat Unit and the Medium-Coarse Grained Granite Klabat Unit. Then, the structure developed in the study area is a Left Normal Slip Fault and *sheeted vein/veinlet*. Then, alterations developed in the study area consist of four facies, which are Quartz + Tourmaline Alteration (104.2 ppm), Quartz + Halloysite + Chlorite + Pyrophillic Alteration (56.5 ppm), Quartz + Illite Alteration (52.4 pm), and Quartz + Kaolinite + Chlorite + Dickite Alteration (19.5 ppm). The type of primary tin mineralization in the study area is the filling of *sheeted veins* in tourmaline and quartz minerals. Ore deposits that were found in the study area consisted of cassiterite, hematite, and pyrite. The type of deposit in the study area was greisen and located in contact between silicate rocks and granite rocks. Primary tin mineralization in the study area was related to fracture, veins, and alteration.