

ABSTRAK

GEOLOGI DAN PROSPEKSI ENDAPAN TIMAH PADA DAERAH KAVLING X DI PULAU BANGKA

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Pulau Bangka merupakan bagian dari jalur Sabuk Timah Asia Tenggara yang dikenal sebagai wilayah penghasil timah utama, baik dari endapan primer maupun sekunder. Penelitian ini bertujuan untuk mengetahui kondisi geologi dan prospeksi endapan timah sekunder pada daerah Kavling X di wilayah operasional PT Timah Tbk., Pulau Bangka. Metode penelitian meliputi pemetaan geologi, analisis litologi, struktur, geomorfologi, dan alterasi, serta pengambilan sampel batuan yang diuji menggunakan *X-Ray Fluorescence* (XRF). Hasil penelitian menunjukkan litologi utama berupa batupasir, breksi, dan endapan aluvial dengan struktur geologi sesar berarah Timur Laut–Barat Daya. Analisis geokimia menunjukkan kadar Sn bervariasi antara 11–1644 ppm, dengan sebagian besar melampaui *cut-off grade* 100 ppm. Endapan timah sekunder bertipe eluvial dan aluvial, terutama terkait dengan Formasi Tanjunggenting dan dataran aluvial. Berdasarkan kondisi geologi, geokimia, dan geomorfologi, daerah penelitian memiliki prospek yang sangat baik untuk eksplorasi timah sekunder pada tahap lanjutan.

Kata kunci: Geologi, Prospeksi, Timah Sekunder, Bangka

ABSTRACT

GEOLOGY AND PROSPECTING FOR TIN DEPOSITS IN THE X PLOT AREA ON BANGKA ISLAND

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Bangka Island is part of the Southeast Asian Tin Belt, which is known as a major tin-producing region from both primary and secondary deposits. This study aims to investigate the geological conditions and the prospect of secondary tin deposits in the Kavling X area within the operational region of PT Timah Tbk., Bangka Island. The research methods included geological mapping, lithology, structural, geomorphological, and alteration analyses, as well as rock sampling followed by laboratory testing using X-Ray Fluorescence (XRF). The results indicate that the dominant lithology consists of sandstone, breccia, and alluvial deposits, with geological structures represented by faults trending northeast–southwest. Geochemical analysis shows that Sn content ranges between 11–1644 ppm, with most samples exceeding the 100 ppm cut-off grade. The identified secondary tin deposits are of eluvial and alluvial types, mainly associated with the Tanjunggenting Formation and alluvial plains. Based on geological, geochemical, and geomorphological characteristics, the study area is considered to have excellent potential for further exploration of secondary tin deposits.

Keywords: *Geology, Prospecting, Secondary Tin, Bangka*