

## INTISARI

### IDENTIFIKASI ENDAPAN SKARN SEBAGAI ZONA MINERALISASI TIMAH PRIMER MENGGUNAKAN METODE *TIME DOMAIN INDUCED POLARIZATION* (TDIP) DENGAN KONFIGURASI *DIPOLE – DIPOLE* DI BLOK “E”, BATUBESI, BELITUNG TIMUR, KEPULAUAN BANGKA BELITUNG

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Letak geografis Indonesia yang berada pada jalur Sabuk Timah Asia Tenggara menjadikan Indonesia menduduki posisi ketiga sebagai negara terbesar penghasil timah di dunia. Kegiatan eksploitasi cadangan timah primer telah dilakukan oleh PT Timah Tbk. salah satunya kegiatan *open pit* di Batubesi. Batubesi merupakan daerah yang berada di Belitung Timur, Kepulauan Bangka Belitung dengan sistem endapan skarn yang mendominasi daerah tersebut. Hingga saat ini belum banyak penelitian khususnya dari *perspective* geofisika mengenai respon endapan skarn yang menjadi zona mineralisasi timah primer. Survei geofisika dilakukan dengan metode *Time Domain Induced Polarization* (TDIP) dengan konfigurasi *dipole – dipole*. Penentuan litologi dan respon endapan skarn didasarkan pada persebaran nilai resistivitas dan chargeabilitas yang ada pada daerah penelitian. Litologi daerah penelitian tersusun atas batulempung, batupasir, batuan metasedimen, skarn dan granit. Keberadaan endapan skarn ditunjukkan oleh respon resistivitas sedang (1.020 – 2.405 Ohm.m) dan chargeabilitas tinggi (20 – 72 msec) yang berada pada kedalaman yang dangkal dan berada di sekitar tubuh granit atau zona struktur geologi berupa sesar geser menganan NW – SE dan sesar geser mengiri NE – SW. Mineralisasi timah primer pada endapan skarn di Batubesi berasosiasi dengan mineral oksida *magnetit*.

**Kata kunci:** *Induced Polarization*, Resistivitas, Chargeabilitas, Skarn Deposit, Timah Primer

## **ABSTRACT**

***IDENTIFICATION OF SKARN DEPOSITS AS PRIMARY TIN MINERALIZATION ZONE USING TIME DOMAIN INDUCED POLARIZATION (TDIP) METHOD WITH DIPOLE - DIPOLE CONFIGURATION IN BLOCK "E", BATUBESI, EAST BELITUNG, BANGKA BELITUNG ISLANDS***

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*Indonesia's geographical location on the Southeast Asian Tin Belt makes Indonesia the third largest tin producing country in the world. Primary tin deposit exploitation activities have been carried out by PT Timah Tbk. one of which is open pit activities in Batubesi. Batubesi is an area located in East Belitung, Bangka Belitung Islands with a skarn deposit system that dominates the area. Until now there has not been much research, especially from a geophysical perspective, regarding the response of skarn deposits which are primary tin mineralisation zones. Geophysical survey was conducted using Time Domain Induced Polarization (TDIP) method with dipole - dipole configuration. Determination of lithology and response of skarn deposits is based on the distribution of resistivity and chargeability values in the research area. The lithology of the research area is composed of claystone, sandstone, metasedimentary rocks, skarn and granite. The presence of skarn deposits is represented by medium resistivity (1.020 – 2.405 Ohm.m) and high chargeability (20 - 72 msec) at shallow depths and around granite bodies or geological structure zones in the form of NW - SE dextral shear faults and NE - SW sinistral shear faults. Primary tin mineralisation in the skarn deposits at Batubesi is associated with the oxide mineral magnetite.*

**Keywords:** *Induced Polarization, Resistivity, Chargeability, Skarn Deposit, Primary Tin*