# RINGKASAN

Bangka Belitung merupakan salah satu provinsi di Indonesia yang memiliki beragam kekayaan alam. Salah satunya berupa timah. Sebaran timah di Pulau Bangka merupakan kelanjutan dari *Tin Mayor South East Asian Tin Belt* yang membentang dari Birma, Thailand, Malaysia, dan berakhir di Indonesia. Sebagaimana yang terjadi di beberapa tempat lain di Pulau Bangka, mineralisasi timah terjadi akibat beberapa kali terbentuknya magma granit tipe-S. Lokasi terjadinya mineralisasi tersebut dikontrol oleh keberadaan struktur. Perpotongan antara struktur berarah Sumatra dan Kalimantan umumnya merupakan tempat yang mengandung konsentrasi timah yang baik, Daerah Riau Silip yang terletak di kabupaten Bangka menarik dilakukan penelitian menggunakan metode eksplorasi geofisika, salah satunya yaitu metode gayaberat. Metode gravitasi atau metode gayaberat banyak digunakan dalam eksplorasi khususnya untuk mengetahui batas kontak litologi, pola sebaran dan analisis keterdapatan struktur geologi berupa sesar atau patahan.

Berdasarkan kontur anomali residual memiliki rentang nilai anomali yaitu -1,7 mGal hingga 1 mGal. Berdasarkan peta anomali residual diduga terdapat keberadaan sesar yang dominan berarah baratlaut-tenggara serta berarah timur-barat. Hal ini dikarenakan terdapat tiga tahap deformasi yang memengaruhi perkembangan struktur di Pulau Bangka yaitu, episode pertama, struktur yang memiliki arah timur-barat terbentuk pada Paleozoikum Akhir. Selanjutnya, episode kedua terjadi pada Trias-Jura, pembentukan granitoid yang diawali atau bersamaan dengan terbentuknya sesar naik yang berarah baratlaut-tenggara. Ketiga, tahapan yang paling muda terjadi pada zaman Kapur, terbentuk sesar mendatar dan turun berarah relatif utara-selatan hingga timurlaut-baratdaya, akibat subduksi di Pulau Sumatra. Berdasarkan hasil analisis *derivative First Horizontal Derivative* (FHD) dan *Second Vertical Derivative* (SVD) dari 4 slicing yang dibuat terdapat dugaan satu sesar berarah barat-timur dan berarah baratlaut-tenggara. Hasil pemodelan 2 dimensi yang dibuat sebanyak 4 slicing dihasilkan komposisi geologi berubah formasi alluvium dengan densitas 1,88 gr/cc dan formasi kompleks pemali dengan densitas 2,67 gr/cc. selain itu, berdasarkan hasil pemodelan 2 dimensi diduga terdapat kederadaan sesar.



**Kata kunci :** Bangka Belitung, Metode Gayaberat, Struktur, Analisis Derivative, Pemodelan 2 Dimensi

## *SUMMARY*

*Bangka Belitung is one of the provinces in Indonesia that has a variety of natural resources. One of them is tin. The distribution of tin in Bangka Island is a continuation of the South East Asian Tin Belt that stretches from Burma, Thailand, Malaysia, and ends in Indonesia. As in several other places on Bangka Island, tin mineralization occurred due to the formation of S-type granitic magmas several times. The location of the mineralization is controlled by the presence of structures. The intersection of Sumatra and Kalimantan oriented structures is generally a place that contains a good concentration of tin. Riau Silip area located in Bangka district is interesting to do research using geophysical exploration methods, one of which is the gravity method. Gravity or gravity methods are widely used in exploration, especially to determine the boundaries of lithological contacts, distribution patterns and analysis of the presence of geological structures in the form of faults or faults.*

*Based on the residual anomaly contour, the anomaly value range is -1.7 mGal to 1 mGal. Based on the residual anomaly map, it is suspected that there is a dominant northwest-southeast and east-west oriented fault. This is because there are three stages of deformation that affect the development of structures on Bangka Island, namely, the first episode, structures that have an east-west direction formed in the Late Paleozoic. Furthermore, the second episode occurred in the Triassic-Jurassic, the formation of granitoid which was preceded or coincided with the formation of a northwest-southeast trending ascending fault. Third, the youngest stage occurred in the Cretaceous, where horizontal and descending faults were formed in a relatively north-south to northeast-southwest direction, due to subduction on the island of Sumatra. Based on the results of the First Horizontal Derivative (FHD) and Second Vertical Derivative (SVD) analysis of the 4 slices made, there is a suspicion of one west-east trending fault and a northwest-southeast trending fault. The results of 2-dimensional modeling made as many as 4 slices produced geological composition changes in alluvium formation with a density of 1.88 gr/cc and pemali complex formation with a density of 2.67 gr/cc. in addition, based on the results of 2-dimensional modeling, faults are suspected.*



***Keywords :*** *Bangka Belitung, Gravity Method, Structure, Derivative Analysis, 2-Dimensional Modeling*