

Delineasi subcekungan sedimen di cekungan sengkang berdasarkan metode gaya berat dan magnetik = Delineation of sub basin in the sengkang basin based on gravity and magnetic method / Aji Suteja

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Abstrak

ABSTRAK

Telah dilakukan penelitian delineasi subcekungan sedimen di cekungan Sengkang yang terletak di lengan bagian selatan Sulawesi. Delineasi subcekungan ini menggunakan kombinasi metode gaya berat dan magnetik, dimana cakupan data magnetik terbatas hanya didaerah Sengkang, sedangkan gaya berat tersebar diseluruh lengan bagian selatan Sulawesi. Berdasarkan analisis horizontal derivative dan second vertical derivative terhadap data gaya berat dan magnetik, subcekungan yang terbentuk dikontrol oleh patahan-patahan di lengan bagian selatan Sulawesi, terutama oleh patahan Walanae. Hasil analisis spektrum menunjukkan kedalaman rata-rata residual adalah 2 km dan kedalaman rata-rata regional sebesar 5,8 km. Hasil dari analisis horizontal derivative dan second vertical derivative yang di overlay dengan citra anomali residual dari gaya berat, dimana batuan dengan densitas tinggi seperti batuan ultrabasa, metamorf dan vulkanik menjadi batas masing-masing subcekungan, sehingga terbentuk 8 subcekungan yaitu subcekungan A, subcekungan B, subcekungan C, subcekungan D, subcekungan E dan subcekungan F, subcekungan G dan subcekungan H. Batuan penyusun subcekungan ini diisi oleh batuan sedimen dari formasi Walanae yang dicirikan dengan densitas rendah dan anomali gaya berat yang rendah pula.

ABSTRACT

The delineation of sub basin has conducted at Sengkang basin that located in the southern part of Sulawesi arm. The delineation of sub basin using a combination of gravity and magnetic methods, where the magnetic data is limited, coverage only Sengkang area, while gravity station are scattered throughout the southern part of Sulawesi arm. Based on analysis of horizontal derivative and second vertical derivative of the magnetic and gravity data, sub basins formerd controlled by faults in the southern arm of Sulawesi, mainly by Walanae fault. The results of the spectrum analysis shows the average depth of residual is 2 km and the depth of the regional is 5.8 km. The results analysis of the horizontal derivatives and the second vertical derivative that are overlaid with the anomalies residual of gravity, where rocks with high density like ultramafics, metamorphic and volcanic be the edge for each sub basin, and there are 8 sub basin namely by sub basin A, sub basin B, sub basin C, sub basin D, sub basin E, sub basin F, sub basin G and sub basin H. Sub basin are filled by sedimentary rocks from Walanae formation that characterized by low density and low gravity anomaly.