Analisis Filter Derivatif Data Gravitasi Untuk Mendeteksi Struktur Pengontrol Manifestasi Panas Bumi Sembalun NTB, Indonesia = Derivative Filter Analysis of Gravity Data to Detect the Structural Control of Geothermal Manifestation, Sembalun NTB, Indonesia

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Abstrak

Lapangan panas bumi Sembalun terletak di Lombok Timur, Nusa Tenggara Barat. Telah dilakukan survey lapangan secara geologi, geokimia, dan geofisika pada tahun 2007 oleh tim peneliti dari PSDG. Dari hasil pengukuran dan survey lapangan ditemukan manifestasi panas bumi berupa air panas Sebau dan air hangat Orok. Selain manifestasi yang ditemukan terdapat pula batuan teralterasi di wilayah Sembalun Lawang dan struktur geologi yang diperkirakan menjadi pengontrol manifestasi panas bumi Sembalun. Berdasarkan data penarikan gaya berat yang dilakukan tim peneliti PSDG pada tahun 2007 orientasi pola sesar didominasi arah Utara-Selatan. Dari analisis data gravitasi satelit, dapat diamati persebaran struktur yang berada disekitar manifestasi, persebaran struktur orientasi didominasi dengan arah baratdaya-timur laut yang hampir utara-selatan. Dengan pemanfaatan metode gravitasi satelit ini didapatkan adanya struktur yang menjadi pengontrol manifestasi air panas Sebau didaerah panas bumi Sembalun. Hasil dari penelitian ini dapat digunakan untuk melakukan penelitian tahap lanjut dalam pengembangan potensi panas bumi didaerah Sembalun.

.....Sembalun geothermal field is located in East Lombok, Nusa Tenggara Barat. Geological, geochemical, and geophysical field surveys were conducted in 2007 by the research team from Geological Agency. From the results of measurements and field surveys, geothermal manifestations were found hotspring, in the form of Sebau hot water and Orok warm water. In addition to the manifestations found, there are also altered rocks in the Sembalun Lawang area and geological structures that are thought to control the geothermal manifestations of Sembalun. Based on gravity lineament data conducted by the PSDG research team in 2007, the orientation of the fault pattern is dominated by the North-South direction. While based on analysis of satellite gravity data, the distribution of the structure around the manifestation, orientation of the structure is dominated by the Southwest-Northeast which is almost north-south like a research of Geological Agency. By utilizing this satellite gravity method, structures were found that control the manifestation of the Sebau hot springs in the Sembalun geothermal area. The results of this study can be used to conduct further research in the development of geothermal potential in the Sembalun area.