

# **Analisis dan model bawah permukaan dengan menggunakan data anomali gaya berat untuk identifikasi sistem panas bumi lapangan "A" = Analysis and Subsurface Model Using Gravity Anomalies Data to Identify Geothermal System in Field "A"**

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## **Abstrak**

Area prospek panasbumi Lapangan "A" terletak pada daerah bagian barat Indonesia. Secara umum, batuan di daerah panasbumi Lapangan "A" didominasi oleh batuan lava gunung api (andesitbasalt) dan breksi. Batuan tersebut sebagian besar berumur kuarter hingga tersier. Analisis dan model bawah permukaan yang dilakukan pada Lapangan "A" menggunakan data anomali gaya berat. Hasil pemodelan gaya berat 2 dimensi yang dikorelasikan dengan data geologi, geokimia dan geofisika (metode magnetotelluric dan magnetic) mengidentifikasikan adanya sistem panas bumi dengan zona reservoir pada bagian selatan puncak gunung penelitian dan manifestasi mata air panas serta fumarol di permukaannya. Zona reservoir sistem panasbumi Lapangan "A" diperkirakan berasal dari batuan gunung api muda yakni breksi, tufa dan batu pasir yang berumur kuarter.

.....Geothermal prospect area in Field "A" is located on the western side of Indonesia. Generally, the rocks in the north and west geothermal field "A" are consists of volcanic rocks such as lava and breccia. Most of them were formed in tertiary and quaternary age. Analysis and subsurface models of Field "A" are based on gravity anomalies data. The result of 2-dimensional gravity modeling correlated with geological, geochemical and geophysical data (magnetic and magnetotelluric method) identified a geothermal system with a reservoir zone in the southern part of the mountain peaks along with the manifestations of hot spring and fumarole on the surface. Geothermal field "A" is estimated to be consists of young volcanic rocks such as breccia, tuff and sandstone from quaternary age.