

PENDUGAAN LAPISAN RESERVOIR PANAS BUMI DI KAWASAN GUNUNGAPI SLAMET DENGAN MEMANFAATKAN DATA ANOMALI MEDAN GRAVITASI CITRA SATELIT

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Abstract	<p>Estimation of the subsurface geological structures of Slamet Volcano area, Central Java, has been done by utilizing gravity field anomaly data of image of Geodetic Satellite (Geosat) and European Remote Sensing-1 (ERS-1) satellite which has been corrected up to free air correction. This research aims to model the 2D profile of the subsurface geological structure which includes some layers of bedrocks, geothermal reservoir, magma chamber, and other geological structures. The procedure of data processing begins with bougeur and topographic corrections. The data obtained, then transformed to horizontal surface, filtered from the local anomalies effects, and corrected from the regional anomaly effect. The results obtained are in the form of residual gravity anomaly data. Modeling is done on the residual gravity anomaly data using 2 ½-D Talwani method packaged in Grav2DC for Window software. The modeling results show the subsurface geological structure of Slamet Volcano region consists of andesite magma with density value of 2.45 gram/cm³, old lava rock with density value of 2.9 gram/cm³, andesite rock with density of 2.54 gram/cm³, and andesitic basaltic rock with density of 2.67 gram/cm³. Based on the research area geological information, strongly estimated that the geothermal reservoirs layers are in the andesite rock by filling in it pores or it fissures in the rock. Keywords: gravity field anomaly, modeling, geothermal reservoirs, Slamet Volcano.</p>
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