

Subsurface structure of Jakarta by gravity survey

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To estimate the subsurface density structure in Jakarta, we made gravity survey by means of a Lacoste&Ronberg gravimeter and GPS receiver for fast static GPS survey from 9th to 12th in September, 2006. To estimate the density structure of the sediment layer, we made a survey along two east-west lines, which are about 50km long. And we made a survey along one south-north line, which is about 25km long. The number of points are about 25 on each east-west lines and 10 on the south-north line.

Surveying on the east-west lines were made from 9th to 11th and that on the south-north line was made at 12th. For the drift correction of the gravimeter, the first and last measurements of a day were conducted at the absolute gravity point in BAKOSTANAL as the reference point.

The gravity value of BAKOSTANAL is 978203093.5 ugal. For the reference of fast static GPS survey, the static GPS measurement was conducted at one point every day.

We use a different point as a reference point on each day. For the terrain correction to calculate the bouguer anomaly, we use the 3 second mesh DTM made by Shuttle Radar Topography.