

ABSTRACT

Sinabung volcano was active from August 27, 2010 to July 28, 2021. Base on this data the location of the hypocenter of an earthquake is important for identifying earthquake source locations and mapping earthquake distribution. The hypocenter analysis used data from January - May 2017 and five stations. An investigation of magma chamber by hypocenter analysis of Volcano-Tectonic (VT) earthquake and 2D anomaly residual incision analysis from the seismic data and gravity data, respectively. Hypocenter value estimation is using Geiger's method with Adaptive Damping (GAD). Gravity data was obtained by making a 2D incision in the CBA cross-section from A to B. The result indicated the location of shallow magma chamber of Sinabung Volcano at a depth of 2-6 km.

Keywords: *Shallow magma chamber, Sinabung Volcano, Seismic, Gravity*