

## **ABSTRACT**

*This Cipendawa area, Cianjur, was declared unfit for permanent housing relocation of earthquake victims due to land slope, soft soil condition, and potential volcanic eruption. This study aims to interpret subsurface lithology using aeromagnetic method in Cipendawa area, Cianjur, which has heterogeneous subsurface lithology. Data acquisition used Mameru V5 Aeromagnet drone with 135 measurement points. Data processing includes International Geomagnetic Referee Field (IGRF) correction, reduction to the pole (RTP), and two-dimensional and three-dimensional modeling. Qualitative interpretation results show three patterns of magnetic anomalies, high anomalies (245 nT-441 nT) in the southeast area which are thought to be volcanic rocks such as basalt and andesite and low anomalies (-21 nT - 185 nT) in the northwest area which are thought to be limestone and sandstone. Analysis of the three cross sections shows variations in rock susceptibility from  $-23 \times 10^{-4}$  SI to  $54 \times 10^{-4}$  SI at a depth of 0-40 meters indicating that the northwest area is a collection of sedimentary rocks such as sandstones due to river flow that causes magnetite-rich minerals to be carried away by water flow, while the southeast area is volcanic rocks such as andesite breccia in accordance with the geological map due to magma intrusion from Mount Gede.*

**Keywords:** *Aeromagnetics, Cipendawa, Susceptibility, Inverse Modelling*