

Geothermal Prospect Prediction at Mt. Ciremai Using Fault and Fracture Density Method

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Abstract : West Java is a province in Indonesia which has a number of volcanoes. One of those volcanoes is Mt. Ciremai, located administratively at Kuningan and Majalengka District, and is known for its significant geothermal potential in Java Island. This research aims to assume geothermal prospects at Mt. Ciremai using Fault and Fracture Density (FFD) Method, which is correlated to the geochemistry of geothermal manifestations around the mountain. This FFD method is using SRTM data to draw lineaments, which are assumed associated with fractures and faults in the research area. These faults and fractures were assumed as the paths for reservoir fluids to reached surface as geothermal manifestations. The goal of this method is to analyze the density of those lineaments found in the research area. Based on this FFD Method, it is known that area with high density of lineaments located on Mt. Kromong at the northern side of Mt. Ciremai. This prospect area is proven by its higher geothermometer values compared to geothermometer values calculated at the south area of Mt. Ciremai.

Keywords : geothermal prospect, fault and fracture density, Mt. Ciremai, surface manifestation

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