

# GEOHERMAL MANIFESTATION DETECTION USING LANDSAT IMAGERY MULTITEMPORAL

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**Abstract:** The amount of people rapidly growth, so they must build many industry for fulfill their daily needs. This activities need energy, and petroleum become the primary energy source. But, petroleum is not renewable energy source and its produce gas that not good for the environment. For the future, people must develop renewable and environment friendly energy sources for their need. One of the renewable energy sources that already exist is geothermal energy. Indonesia has huge potency of geothermal, around 40 percent from geothermal potency on the earth. So, research activities on geothermal need to be developed. But the problem of these activities is sometime geothermal manifestations placed on area that difficult to reach, like forest or mountain. The manifestations of geothermal are look like soil that contains hot steam and alteration minerals. By using remote sensing technology, it possible to get data without goes to that area. In this paper, the writer research about how to detect geothermal manifestation using remote sensing technology. There are 2 important characteristics from geothermal manifestation, firstly is this manifestation has higher temperature from its environment, and secondly are alteration minerals that contain in soil that placed at geothermal manifestation area. The writer use 10 years Landsat imagery data to detect and make analyze from this 2 characteristics of geothermal manifestation with study area at Mount Patuha, West Java.

Keywords: Geothermal, Remote Sensing, Temperature Anomaly, Alteration Mineral