Reservoir Characteristics Based On Analysis Of Geochemical Surveys In The Manifestation Area Of Blawan Ijen. Siti Diah Ayu Febriani, S.Si, M.Si (Pembimbing I) as chief counselor

Irfandi Muslim Amin
Study Program of Renewable Energy Technique
Majoring of Engineering

ABSTRACT

One of the efforts to overcome energy problems is to utilize geothermal energy as a sustainable and environmentally friendly raw material. This study aims to determine the reservoir characteristics of a geothermal field as an initial stage of exploration for the establishment of a geothermal power plant including fluid type, reservoir temperature and geothermal system using manifestation samples in the form of hot springs in Dusun Blawan, Sempol District, Bondowoso Regency, East Java Province. The elements studied were the fluid content of Na, K, Ca, Si, Cl and SO4, the highest chemical concentration in the fluid was Si (silica) at 46.6%. Based on the geochemical analysis of hot springs, it shows that the type of hot springs in the research area is the type of sulfate springs, the reservoir or subsurface temperature in the study area based on the Na / K geothermal equation of 405.67 ℃, the research area is included in the water domination system and can developed as an area with the use of geothermal energy in meeting the needs of national electrical energy because the geothermal system in the research area is classified as high enthalpy so that the prospect is developed as a source of electrical energy.

***Key words**: chemical, manifestations, reservoir*