GEOLOGY AND STUDY OF RESERVE CALCULATION METHOD ON ANDESITE BASED ON GEOELECTRIC AND REGULAR BLOCK METHOD OF BASEH AND SURROUNDING AREAS, KEDUNGBANTENG SUB-DISTRICT, BANYUMAS DISTRICT, CENTRAL JAVA

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ABSTRACT

Baseh area is located in Kedungbanteng sub-district, Banyumas district, Central Java, specifically under Slamet Mountain slope. Slamet Mountain is an active volcano mountain up until now. One of the potential in this area is an excavation material of andesite, that can be found from andesite intrution body form. The purpose of this research are including to find out the general geological conditions, geological history and andesite characteristics of the research area. Beside that, this research conducted to determined the sub-surface geological conditions using geoelectric method and to calculate the reserved volume of andesite using regular block method at the mining location that occured in research area. Geomorfological varieties that can be found at the research area can be determined into two type meadow plains (V8) namely volcanic(V11). The stratigraphy varieties of the research area divided four kinds that sorted from the oldest to the youngest layers are mudstone layer unit, andesite intrusion layer unit, volcanic-flow breccian layer unit, and lava andesitic layer unit. The geological structure that developed in research area is left reserve slip fault Baseh. The case study that conducted to calculate the reserved ammount of andesite conducted from geoelectric data regular block method of influenced area. The data that used to determined the sub-surface geological condition and the andesite layer thickness are conducted using geoelectic data that calculated with resistivity configuration method of schlumberger. The principle of resource calculation with regular block method of influenced area is to take data from each observation point within a block. The result of andesite reserved calculation using regular block method in the research area are 5.468.012,034 tons.

Keywords : Baseh, andesite, geoelectric, schlumberger configuration, regular block of influenced area method