ABSTRACT

ANALYSIS OF SHALLOW SUBSURFACE LAYER AS A FLOOD HAZARD ZONE USING RESISTIVITY METHOD WITH SCHLUMBERGER CONFIGURATION IN SEMARANG CITY

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The high tide in the Java Sea to be one result of the occurrence of floods rob in Semarang City. Tidal flooding impact for the community, among others, disrupt economic activity, damaging the city's infrastructure, the incidence of skin diseases and diarrhea in the community around the puddles, and the destruction of a variety of habitats in the coastal area.

This research was carried out by using 1-dimensional resistivity Schlumberger configuration. The study was conducted in 12 measurement points with a 600-meter stretch of the measurement electrodes. This research can be conducted interpretation of the soft layer in the shallow subsurface resistivity variations based on correlation with the rock and drill data in Semarang.

The results obtained after the processing of the data is the intensity resistivity maps and isopach maps. Correlation of two maps can be analyzed that the area is prone to catastrophic flooding is the area east to the southeast area of research because it has a layer of alluvial clay or thick with a depth of 22.3 m - 32 m from the ground surface area of research. Bedrock boundary only visible on the drill log data are used and can be analyzed further if there is additional information drill log data the study area.

Keywords: resistivity method, schlumberger configuration, soft lining, intensity maps, isopach maps, flood