ABSTRAK

IDENTIFIKASI LETAK DAN KEDALAMAN AKUIFER AIRTANAH DENGAN MENGGUNAKAN METODE KONFIGURASI SCHLUMBERGER KABUPATEN SAMPANG PROVINSI JAWA TIMUR

Oleh:

OldericoMarues
115080013

Telah dilakukan penelitian Akuifer Air Tanah dengan Metode Geolistrik *Schlumberger* daerah Kabupaten Sampang Jawa Timur bertujuan mengidentifikasi kedalaman dan ketebalan akuifer (airtanah) berdasarkan penampang data nilai resistivitas *sounding* serta penyebaran akuifer (airtanah) berdasarkan pemodelan 3D resistivitas bawah permukaan.

Data penelitian merupakan data sekunder hasil proses Akusisi menggunakan metode geolistrik dengan konfigurasi *schlumberger*. Jumlah data 32 titik, spasi antar titik sekitar 2 km, luas area pengukuran 2792.82 km^2. Data pengukuran berupa beda potensial *(ΔV)*, arus (*I*), resistivitas (*Rho*), dan factor geometri (*K*). Pengolahan data dilakukan dengan korelasi semua titik pengukuran menjadi 3D *Solid Model*.

Hasil interpretasi geolistrik berdasarkan penyebaran pola resistivitas geolistrik menunjukkan keberadaan suatu akuifer dengan nilai resistivitas sekitar 10-30 ohm.m yang diidentifikasi sebagai Akuifer Batupasir. Memiliki 2 akuifer dengan ketebalan AkuifeR Dangkal 10-30 meter dan Akuifer alam 65-100 meter serta kedalaman lebih dari 10 meter. Pola Distribusi akuifer (airtanah) berdasarkan data *isoresistivity solid model 3D* (kesamaan nilai resistivitas) untuk batupasir menunjukan pola kemenerusan yang bervariasi berdasarkan kedalaman. Penyebaran Akuifer dangkal berupa pola setempat namun untuk Akuifer dalam cenderung kebagian tenggara daerah penelitian.Terdapat pengaruh intrusi air laut pada kedalaman 40 meter dengan ketebalan sekitar 10-40 meter.

Kata kunci *: geolistrik sounding, schlumberger, akuifer (air tanah), resistivitas*.

ABSTRACT

IDENTIFICATION OF THE LOCATION AND DEPTH OF GROUNG WATER AQUIFER THE WITH SCHLUMBERGER GEO ELECTRICAL METHOD IN SAMPANG DISTRICT, EAST JAVA PROVINCE

By:

Olderico Marques
115080013

The research has been done by distributing the water ground aquifer with the Schlumberger Geo electricity method from Sampang District region East Java District it is aim to identify the deepest and thickness of (water ground) aquifer based on diameter data ,the score resistivity sounding also the distribution of (water ground) aquifer based on the style 3D resistivity under surface.

Data research is secondary data get result from acquisition process using geo electricity method with configuration of Schlumberger. The total of data is 32 (thirty two) point is around 2 kilo meters. Wide area of measurement is 2792.82 (two thousand seven hundred ninety two point eighty two) kilo meters^2. Data of meusurement it is a different potential (AV) current (i), resistivity (Rho), and factor of geometry (K). Data processing were done using all-nodes corelation to create a three-dimensional solid model.

The interpretation result of geo electricity based on the pattern of resistivity geo electricity showing the presence of an aquifer with the resistivity score around 10-30 (ten to thirty) ohm.m. Which is identified as aquifer of sandy stone. Have 2 aquifers with the thickness of shallow aquifer 10-30 (ten to thirty) meters and dee aquifer 65-100 (sixty to one hundred) meters also the deepen more than 10 (ten) meters.Pattern of aquifer distribution (water ground) based on the data isoresistivity solid style 3D (the equality score of resistivity) for sandy stone has shown the pattern which is continuously various based on the deepen. The distribution low aquifer it is local pattern but for the deep aquifer dispose to the part of South East research place. There is an influence from sea water instrusion on deepest of 40 (forty) meters with the thickness around 10-40 (ten to forty) meters.

Keywords: *geoelectric sounding schlumberger, aquifer (groundwater), resistivity*