

## ABSTRAK

Penelitian Pendugaan Penyebaran Akuifer Air Tanah dengan Metode Geolistrik *Schlumberger* daerah "X" Kabupaten Alor. Data penelitian merupakan data sekunder hasil proses Akuisisi menggunakan metode geolistrik dengan konfigurasi *Schlumberger*. Jumlah data 20 titik, spasi antar titik sekitar 100-200 meter, luas area pengukuran 3 setengah km<sup>2</sup>. Data pengukuran berupa beda potensial ( $\Delta V$ ), arus ( $I$ ), resistivitas ( $Rho$ ), dan faktor 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 17,8-31,6 ohm.m yang diidentifikasi sebagai Akuifer Airtanah. Memiliki 2 akuifer dengan ketebalan Akuifer Dangkal 50 meter serta kedalaman mulai dari 50 meter Akuifer Dalam. Pola Distribusi akuifer (airtanah) berdasarkan data *iso-resistivity solid model 3D* (kesamaan nilai resistivitas) untuk batu pasir menunjukkan pola kemenerusan yang bervariasi berdasarkan kedalaman. Penyebaran Akuifer Dangkal berupa pola setempat namun untuk Akuifer Dalam cenderung kebagian timur daerah penelitian.

**Kata kunci:** Air Tanah, Geolistrik, Resistivitas, *schlumberger*, Alor, Nusa Tenggara.

## ABSTRACT

Research has been done to identify the presence of cavities by using Geoelectric method Wenner-Schlumberger at Batulicin Tanah Bumbu South Kalimantan to determine the presence of subsurface cavity based on cross-sectional subsurface resistivity value.

This research uses resistivity method with Wenner-Schlumberger configuration. Wenner-Schlumberger method is a method with constant spacing rules system to record multiplier factor. "n" is the ratio of distance between electrode C<sub>1</sub>-P<sub>1</sub> (or C<sub>2</sub>-P<sub>2</sub>) with P<sub>1</sub>-P<sub>2</sub>. The instrument used was resistivitymeter equipped with four electrodes that able to read the output of voltage respons as consequence current that has been injected in the sand surface through two potential electrodes and two current electrodes.

This research used Res2Dinv software for iso-resistivity map 2D profile below the surface. The result of interpretation 2D geoelectric cross-section profile is obtained that show a cavity below the surface based on the value of resistivity. For cavity can be assumed that have high resistivity values above 3000 Ohm.m due to the nature of air-filled cavity

**Keywords :** cavity, resistivity, Wenner-Schlumberger, South Kalimantan