Perhitungan Volume Cadangan Bahan Galian Tambang Andesit Menggunakan Metode Resistivitas Dipol-Dipol Dan Interpolasi 3D Di Lapangan "A" = Volume Calculation of Andesitic Mining Materials Using Dipole-Dipole Resistivitas Method and 3D Interpolation at "A" Field

Ade Rama Tanjung Putra, author

Abstrak

ABSTRAK
Pertumbuhan ekonomi dan gencarnya pembangunan infrastruktur secara nasional menyebakan kebutuhan bahan bangunan meningkat, termasuk Batuan Andesit. Batuan Andesit banyak dimanfaatkan untuk pembentukan pondasi bangunan, pembuatan jembatan serta pengaspalan jalan. Meskipun demikian, data BPS 2013-2015 menunjukkan bahwa peningkatan kebutuhan Batuan Andesit justru disertai dengan penurunan jumlah pengusaha batu andesit serta penurunan volume produksi batu andesit. Untuk menjamin keberlanjutan proses pembangunan nasional, perlu dilakukan pencarian cadangan Batuan Andesit baru. Survei geolistrik resistivitas telah dilakukan dengan 15 lintasan di lokasi A Provinsi Gorontalo. Data resistivitas semu yang diperoleh diolah menjadi model dua dimensi melalui inversi linear menggunakan perangkat lunak RES2DINV. Model dua dimensi selanjutnya diinterpolasi menggunakan perangkat Rockworks15 menjadi model tiga dimensi. Analisa model dua dimensi dan tiga dimensi menunjukkan adanya cadangan Batuan Andesit di lokasi A dengan batas bawah resistivitas terkecil 198 .m. Adapun volume total cadangan Batuan Andesit sebesar 2.821.500 m3. Hasil ini menunjukkan bahwa Gorontalo berpotensi menjadi penyedia Batuan Andesit untuk menyokong proses pembangunan lokal di sekitarnya.<hr>
<i>ABSTRACT
The economic growth and infrastructure development on national scale in Indonesia have caused the demand of building material increased, including andesitic rocks. Andesitic rocks have been utilized for creating building foundation, bridge development as well as road paving. Regardless, according to BPS data from 2013-2015 during these growth, the number of andesitic rocks businesses and mining were decreased. Therefore, to ensure the continuation of national development, an exploration of new andesitic rocks mine is required. Geo-electrical resistivity survey with 15 survey lines has been done at location A, Gorontalo Province. The apparent resistivity data acquired have been processed into two-dimensional model through linear inversion using software RES2DINV. This two-dimensional models were further interpolated and extrapolated using software Rockworks15 to into three-dimensional model. Analysis of these models shows a potential andesitic rocks reserves at location A with minimum lower cut-off resistivity is 198 .m. The total reserve volume ranging 2.821.500 m3. This result implies that Gorontalo can be a supplier of andesitic rocks to support local development.<i/>