# Analisis Zona Mineralisasi Emas Menggunakan Metode Resistivitas dan Induced Polarization Konfigurasi Dipol-Dipol Pada Daerah Pertambangan Emas Rakyat Dengan Jenis Endapan Sulfidasi Rendah Daerah Kertajaya, Kecamatan Simpenan, Kabupaten Sukabumi = Analysis of Gold Mineralisation Zones Using Resistivity and Induced Polarization Methods Dipole-Dipole Configuration in People's Gold Mining Areas with Low Sulfidation Deposits Kertajaya, Simpenan District, Sukabumi Regency

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Abstrak

Indonesia terletak pada pertemuan tiga lempeng yang menyebabkan munculnya jajaran busur magmatik. Pada jajaran busur magmatik terjadi pengendapan mineral emas. Endapan emas yang berada di Indonesia didominasi dengan endapan epithermal sulfidasi rendah. Untuk menemukan cadangan dan potensi endapan mineralisasi emas dibutuhkan analisis untuk mengetahui lokasi dan bentuk geometri dari zona endapan mineralisasi emas. Metode geofisika merupakan metode yang dapat menganalisisi zona endapan mineralisasi emas. Metode geofisika yang digunakan dalam penelitian ini adalah metode resistivity dan induced polarization dengan konfigurasi dipole-dipole. Metode resistivity digunakan untuk mengidentifikasi jenis batuan yang berada diwilayah penelitian. Sedangkan metode induced polarization digunakan untuk mengidentifikasi lokasi dan volume zona pengendapan mineralisasi emas. Jumlah lintasan yang digunakan sebanyak 3 lintasan dengan masing masing lintasan memiliki panjang 405 m dengan 81 elektoda. Hasil data pengukuran metode resistivity dan induced polarization diinversi menggunakan software res2dinv dan dilakukan least square inversion untuk memperoleh penampang 2D. Hasil pengolahan data menunjukan variasi resistivity berkisar 4,5419-2787,6 â¦m dan induced polarization berkisar 36,720-833,92 msec. Berdasarkan korelasi penampang 2D dan peta geologi ditemukan bahwa sebaran jenis batuan wilayah penelitian adalah breksi tuff dengan kisaran nilai resistivity 70,557-1313,7â¦m dan andesit dengan kisaran nilai 595,8-1313,7 â¦m. Zona mineralisasi emas dengan nilai induced polarization 200 msec. Berdasarkan korelasi penampang 2D resistivity dan induced polarization ditemukan bahwa pengendapan mineralisasi emas berada pada breksi tuff dan andesit. Dari penampang 2D dilakukan pemodelan 3D untuk mengetahui estimasi volume zona mineralisasi emas software. Ditemukan hasil volume zona mineralisasi emas sebesar 289.452,6103 .

.....Indonesia is situated at the confluence of three tectonic plates, which gives rise to the emergence of a magmatic arc range. In the magmatic arc sequence, gold mineral deposition occurs. Gold deposits in Indonesia are dominated by low sulphidation epithermal deposits. In order to identify reserves and potential gold mineralization deposits, it is necessary to conduct an analysis to determine the location and geometry of the gold mineralization deposit zone. Geophysical methods are a type of analysis that can be used to analyse gold mineralization deposit zones. The geophysical methods employed in this research include resistivity and induced polarization methods with a dipole-dipole configuration. The resistivity method is utilized to

identify the type of rock present in the research area, while the induced polarization method is employed to ascertain the location and volume of gold mineralization deposition zones. The number of tracks utilized was three, with each track measuring 405 m and comprising 81 electrodes. The measurement data obtained from the resistivity and induced polarization methods were inverted using the res2dinv software, and least square inversion was performed to obtain two-dimensional cross sections. The results of data processing indicate that the resistivity variation ranges from 4.5419 to 2787.6 Î©m, while the induced polarization ranges from 36.720 to 833.92 msec. Correlation of the 2D cross sections with geological maps revealed that the rock types present in the study area are tuff breccia and andesite, with resistivity values ranging from 70.557 to 1313.7 Î©m. Gold mineralization zones with induced polarization values 200 msec. Based on the correlation of 2D resistivity and induced polarization cross sections, it was determined that gold mineralization deposition occurred in tuff breccia and andesite. From the 2D cross section, 3D modelling was conducted to estimate the volume of the gold mineralization zone. The volume of the gold mineralization zone was determined to be 289,452.6103 m3.