ABSTRAK

Umumnya data kadar sumberdaya bijih emas yang memiliki nilai koefisien variansi (CV) lebih dari 0,5 menunjukan variabilitas nilai data. Teknik kriging *linear* tidak memberikan hasil yang memuaskan sehingga dibutuhkan teknik *non-linear*. Permasalahan disini adalah bagaimana menentukan teknik yang cocok untuk estimasi kadar sumberdaya emas *ephitermal*, bagaimana klasifikasi sumberdaya didasarkan pada jarak rata-rata antar sampel, dan bagaimana analisis hubungan kadar-tonase. Penelitian ini membandingkan teknik kriging *linear* OK (*ordinary kriging*) serta *non-linear* medIK (*median indicator kriging*). Pengolahan data menggunakan *software* Micromine 2020. Evaluasi kinerja kedua teknik kriging akan dianalisis. Hasil *crossvalidation* dari estimasi sumberdaya emas *epithermal* menunjukkan teknik medIK, OK berturut-turut mempunyai nilai koefisien korelasi (r) 0,647; 0,103; *root mean squared error* (RMSE) berturut-turut 0,097; 0,875. Berdasarkan hasil *crossvalidation* dan analisis statistik menunjukan penerapan teknik medIK cukup akurat pada estimasi kadar sumberdaya emas *epithermal*Struktur geologi daerah penelitian adalah *vein epithermal low sulphidation*. Distribusi kadar pada struktur ini sangat tidak menentu (*erratic*) sehingga teknik kriging non-*linear* (medIK) dapat digunakan. Hasil estimasi medIK, menghasilkan sumberdaya terukur, tertunjuk, tereka berturut-turut 41.122 ton, 17.317 ton, 40.735 ton dengan kadar rata-rata berturut-turut 0,618; 0,603; dan 0,79 Au (ppm).

ABSTRACT

In general, grade distribution of gold ore resources that have coefficient of variation (CV) value higher than 0,5 will show the variability of non-homogeneous (eratic) data values. Kriging linear technique does not give satisfactory results, so non-linear techniques are needed. The problem here is how to determine a suitable techniques for estimating the grade distributions of gold epithermal resources, how the classification of its resources based on average distances, and how to analyze the tonnage–grade relationships. This research compares linear methods (ordinary kriging) and non-linear method (medIK/median indicator kriging). This research uses micromine 2020, The performances of two kriging techniques will be analyze. The results of crossvalidation from the gold epithermal estimation show the medIK and OK respectively have a coefficient of corellation (r) value 0,647; 0,103, root mean squared error (RMSE) value 0,097; 0,857. Based on crossvalidation results, the application of medIK technique is quite accurate in estimating the grade distribution of gold epithermal resources. The geological structure on the reasearch area is vein epithermal low sulphidation where the grade distributions on this structure are non-homogeneous (eratic) so the application of non-linear technique (medIK) are recommended. The resources classification results of medIK method shows the measured resources, indicated resources, and inferred resources are respectively 41.122 tons; 17.317 tons; and 40.735 tons with and average grades of 0,618 Au (ppm); 0,603 Au (ppm); and 0,79 Au (ppm).