

ABSTRACT

PT. Amman Mineral Nusa Tenggara is one of the largest mining companies in Indonesia engaged in mining of copper ores with gold and silver minerals using open pit method. Copper deposit in PT. Amman Mineral Nusa Tenggara is included into porphyry copper reserves. PT. Amman Mineral Nusa Tenggara estimates the levels of copper and gold using several methods. In this research the estimation will be done by using ordinary kriging method. The average grade value that is considered true grade is the estimated average grade value using the nearest neighbour method.

Ordinary kriging method used to estimation on a bench -150 to bench -210 because the bench has not been carried out estimation uses this method. In estimates, often there are error boundary that affects estimation next stage.

Variogram made to estimate the grade of Cu having nuggets effect between 0,75-0,27 while variogram made to estimate the grades of Au having nuggets effect with a value of between 0,76-0,22. Validation block model should be conducted by comparing between estimation uses the method ordinary kriging with estimated by using the method nearest neighbour. Estimation grades of copper and gold out of each lithology, there are volcanic lithology, diorite, intermediate tonalite, young tonalite and domain intermediate lower cores.

The average grades of Au highest grade are on lithology diorite with the grades of production of 0.927% and the average lowest grades of Cu are on lithology young tonalite with the grades of 0,170%. The average grades of Au highest is at lithology intermediate tonalite with the grades of 1,256 ppm while the average Au lowest grades are on lithology young tonalite with the 0,346 ppm levels.