

## ABSTRACT

One of the main problem in exploring mining product's level and sources is to choose the right method in order to get the optimal results. The coordinates of drilling samples are really influencing the process of estimation of the other region, especially the value of experimental semivariogram which impacts the weights value of the drilling region. In this final project, nickel is choosen as the estimation variabel and ordinary kriging as the estimation method.

Block ordinary kriging method is one of the kriging method which is used with 10 m x 10m grid by calculating the gap between each samples. There are 58 samples data which are used with the depth of 90 m in unsubscribed area.

From the estimation result that have been calculated, spherical gives the best result among the other models. The RMSE(Root Mean Square Error) value of the samples data is 0.174. This value is counted with some parameters of the model included 0.1 for nugget effect, 50 for range and the value of 0.2 for sill.

The result shows homogeneous variance from the F test. It means that different grid sizes can be said to have same precision. However, based on the experience shows that the smaller grid size gives high value of biased because of high density which means more and more blocks to estimate.

**Keywords :** estimation, ordinary kriging, RMSE, spherical, variance