

## ABSTRACT

PT. Antam, Tbk. Gold mining unit Pongkor (UBPE) located in Bogor Regency, West Java Province. In the power of the mining area there are three main vein being mined is Ciurug, Kubang Cicau, and Main Ciguha. To Ciurug level 500 myself using Cut and Fill mining, stope mining operations on multiple Ciurug have reached the limit in accordance with the end that has been recommended to the left sill pillar at different thicknesses for each location. On the other hand, the left sill pillar representing the remaining reserves, which could increase mine productivity, due to the current state of PT. Antam Tbk. - UBPE Pongkor trouble getting the front ore mining which can be eject safely.

If there is an attempt at making up the rest of the sill pillar should be done with a different approach but still consider the stability of the sill pillar left. Approach to do that is by sill pillar extraction method is necessary for the analysis of the design concept. The evaluation is done by making modeling through Phase2 program that assisted with RocLab program for data preparation required material properties. Modeling is made in two stages, namely modeling existing conditions, and extract pillar by means perslice with thick sill pillar is 8 m.

In this evaluation will be conducted each stope analysis can be based on the value of strength factor, displacement and safety factor that indicates the strength of the sill pillar and stope is safe or not. Results demonstrate the value of existing stope on roof strength factor  $< 1.3$ , delta shows the roof displacement exceeding three elastic displacement (failure), and showing the roof safety factor  $\leq 1.2$  (failure), the left wall and the right wall  $\geq 1.2$  ( safe).

1 slice stope results demonstrate the value of strength factor on the left wall, roof, and walls tend to experience the same right which decrease when the time will be open stope, delta value of displacement on the left wall, roof, and walls have a right to point 4, point 4 and point 3 stated "failure", the value of the safety factor on the roof failure due to  $\leq 1.2$ .

Stope slice 2 shows the strength factor on the left wall and right up when stope will be opened, while the current decrease when the roof is opened, the value of delta displacement is smaller than three times the elastic displacement and factor of safety are only on the roof menunjukkan  $\leq 1.2$  (failure ).

Stope slice 3 shows the strength factor values are left wall cavity so that the strength factor value = 0, the roof and walls fell right time to open. Delta displacement only just on the right wall there are three points that exceed three elastic displacement (failure). Security factor scores only on the roof showed  $\leq 1.2$  (failure) if when opened.