

## ABSTRACT

PT.Gunungbayan Pratamacoal (GBPC) Block II is holder company Coal Exploitation Agreement (PKP2B). GBPC Block II is located in Muara Tae, Camp Baru, West Kutai regency of East Kalimantan province. GBPC Block II has been mining since 1998 by implementing a system of open-pit mining. Mining method used backfilling, that is stockpiled overburden into the pit had been finished mine.

Pit Jumbo is one of pit located in the company. it will be to expand, Then in expansion necessary slope stability analysis to support the implementation in mining activity. therefore, PT. Gunungbayan Pratamacoal conduct geotechnical investigations in the four drill holes GT-01, GT-02, GT-03 and GT-04. From each drill hole will be taken some rock samples which would be test physical and mechanical properties of rocks in laboratory.

In analyze stability parameter single slope were create two high as 6 m and 10 m, then for the angle as 45 °, 50 °, 55 °, 60 ° and 65 °. then for the overall slope parameters were analyzed following the lithologic log drill reached a depth of 96,40 meters.

Rated Safety Factor (FK) is recommended minimum  $FK \geq 1.2$  for single slope and  $FK \geq 1.3$  for the overall slope. The method for analyze teh slope used limit equilibrium method with assistance from program Rocscience Slide 6.0.

And slope geometry recommended for PT. Gunungbayan Pratamacoal is for the single slope height of 10 m with an angle 60 °, while for overall slope geometry can be still said to be stable with high of 100 m with an angle 44 ° angle.