

## ***ABSTRAC***

Mining activities are conducted in PT. BUMA Job Site Senakin using open pit system with high levels varied between 0.5 to 14 meters. Overburden stripping is done by 2 methods of dismantling the direct excavation as much as 30% and 70% with blasting methods. Overburden production targets for demolition by blasting method in May in Pit 4 is 14,044 Bcm / day, while the production of blasting results on average per day were obtained in Pit 4 is 10 487 Bcm / day so that the planned production target has not been achieved.

PT. BUMA is the contractor of PT. Arutmin Indonesia to dismantle overburden by blasting method. Blasting initiation systems used are non-electric initiation systems, the time delay in the hole (in-hole delay) of 500 ms and the time delay on the surface (surface delay) of 25 ms, 42 ms and 75 ms.

The explosives used were Anfo and Emulsion (Fortis) 816 with an average weight of 145.00 kg/pit and booster explosive weighing 0.4kg/explosive hole. At the time of the study carried out blasting geometry is applied is: 7m burden; spacing of 8 m; stemming 4 m; blast hole depth of 9 m; primary charge 5 m, 10 m high levels and powder factor 0.47 kg/m<sup>3</sup>.

Efforts to comply with the production of explosive overburden the number of holes needed for production targets in May on average per day in Pit 4 is a 30 hole uncovered explosive rock volume of 10 487 m<sup>3</sup>/jumlah explosives used in Pit 4 at 4091.95 kg / the powder factor of 0.37 kg/m<sup>3</sup>. Meanwhile, to reduce the boulder in the field today, blasting geometry repair done by using the approach of the theory of RL Ash (1967).

To predict rock fragmentation produced, can use the formula of KUZNETOZ. Results of the study on the percentage fragmentase rock, drilling efficiency, use of explosives and blasting production is based on the theory of RL Ash (1967). because it produces a lower powder factor. If the rock density of 2.46 gr/cm<sup>3</sup>, then buden 6 m, 7 m spacing; stemming 4 m; subdrilling 1 m; kadalaman blast holes 9 m; higher levels of 8m; primary charge 5 m and weight of explosives was 105.55 kg / hole.