

## ABSTRACT

CV. Gunung Mulia's andesite mine is located in the Somorejo Village, Bagelen Sub-district, Purworejo District, Jawa Tengah Province. CV. Gunung Mulia is a company that works in exploration and mining with a production target around 111,090m<sup>3</sup>/year. The sale price is Rp 75,000/ m<sup>3</sup>. The mine system is using surface mining with the quarry method. The mining operation of andesite includes land clearing, loosening, loading, and hauling.

The amount of investment to open the mine is IDR. 3,161,606,186,- in which the amount of investment is equal to fixed capital by the amount of IDR. 2,110,231,186,- capital expenditure IDR. 951,375,000,- and the cost of UKL and UPL by the amount of IDR 100,000,000,-.

The source of funds that is needed for the investment of the mining operation consists of two alternatives, which are :

- a. 100% owner's equity;
- b. 75% owner's equity 25% loan.

What we get from the economic analysis for each of the alternatives are :

- a. 100% owner's equity obtain NPV IDR 1,789,117,027,- of DCFROR 37%, and the payback period is 1.9 years.
- b. 75% owner's equity and 25% loan obtain NPV IDR 2,163,976,502,-, of DCFROR 48%, and the payback period is 1.4 years.

Sensitivity analysis showed capital alternative both when the increase / decrease in rental rates by 15%. But the selling price of the two capital alternative will reach its critical and not worth the time of decreased selling prices by 10% and 15% to 15% of equity capital and loan capital. Conversely, if there is an increase of 5% to 10%, then the project remains eligible for consideration. Alternative capital structure of 100% of equity capital will experience critical and not worth the time to increase the initial capital of 40%, while the capital structure of 75% equity 25% loans remain eligible for consideration. Conversely, if there is a decrease initial investment of 10% to 40%, then the project remains eligible for consideration