

ABSTRACT

Geo Mining Energy Inc. has 5,011 HA area of IUP production operation. According to the finding of filed survey and exploration drilling activity, it has found that there are 13 coal seams at Block Palas I with 0.5-16 m thickness. Its strike is relatively to Northwest – Southeast, its dip direction to Northeast, and its dip is about 5-12°. By reserve estimation conducted at Block Palas I, it is acquired that the total of the reserve is 35.5 million tons. The stripping ratio of mining is 5:1 in average.

The problem of this study is Geo Mining Energy Inc. needs to conduct a long term program that is appropriate to the form of dissemination of coal seam layer with the production target of 1,200,000 tons per year and the stripping ratio constraint of 5:1. This coal mine is 29 and 7 months years old.

The geometry of the slope mining is 10 m of bench height, 6 m of bench width, 50° of single bench angle and $\leq 45^\circ$ of overall bench angle. The width of hauling road is 17 m for straight one and 22 m for turning ones with superelevasi value of 4% from the road width.

The result that is derived for scheduling of coal production and overburden on the examined area which is conducted per period (5 year) along 30 years are :

- a. Period 1, the coal production is 6.090.126,96 tons and the *overburden stripping* 19.998.868,03 BCM with the *stripping ratio* (SR) 3,28:1.
- b. Period 1, the coal production is 6.086.538,87 tons and the *overburden stripping* 15.600.786,33 BCM with the *stripping ratio* (SR) 2,56:1.
- c. Period 1, the coal production is 6.093.950,31 tons and the *overburden stripping* 16.655.064,25 BCM with the *stripping ratio* (SR) 2,73:1.
- d. Period 1, the coal production is 6.029.095,10 tons and the *overburden stripping* 16.169.135,12 BCM with the *stripping ratio* (SR) 2,68:1.
- e. Period 1, the coal production is 6.047.157,23 tons and the *overburden stripping* 15.920.798,14 BCM with the *stripping ratio* (SR) 2,80:1.
- f. Period 1, the coal production is 5.180.046,84 tons and the *overburden stripping* 19.394.735,43 BCM with the *stripping ratio* (SR) 3,74:1.

Overburden boarding conducted on two stacks of waste dumps is on the West side of pit. The used hauled equipment is Komatsu D85ESS-2A bulldozer, the digging and loading equipment that will be used for *stripping* the overburden materials is Komatsu PC1250SP-7 backhoe excavator, the digging and loading equipment that will be used for loading the coal Komatsu PC300SE-7 backhoe excavator, and the hauler equipment that will be used for carrying is Komatsu HD465-7 overburden dump truck and the hauler equipment that will be used for carrying the coal is Hino FM260JD dump truck. The mine drainage system which has been designed consists of open canal, sump on the pit bottom and settling pond.