

ABSTRACT

Stated from the Agreement of Teguh Sinarabadi's Coal Mining Production Operation, the area of this firm is 2,404 hectares. Based on field surveys and drilling exploration, there are 15 seams with a thickness between 0.2 to 4 meters (m) in Lysat 2 blocks. General direction of coal layer (strike) relative North East to South West, dip direction to the South East, and the angle of dip ranges from 35-45 °. According to the reserve assessment that is conducted on the Lysat 2 blocks, it is acquired 9 million tons of coals. The maximum Stripping Ratio is 12:1.

The research problem is Teguh Sinarabadi corporation needs to develop a new mine design. This design should include production schedules. The problem solving method should be done by analysing secondary data including exploration data and drilling result. It will give a result in geological modeling, reserve estimation, mining pit design and coal scheduling production.

The results that is obtained for scheduling of coal production and overburden in Lysat 2 block, which will be conducted in 4 years are:

- a. In the first year, the coal production are 2,032,729.04 tons, overburden removal amount is 25,162,224.39 BCM with 12,4:1 stripping ratio.
- b. In the second year, the coal production are 2,185,036.07 tons, overburden removal amount is 26,847,353.69 BCM with 12,3:1 stripping ratio.
- c. In the third year, the coal production are 2,059,088.48 tons, overburden removal amount is 25,193,003.51 BCM with 12,3:1 stripping ratio.
- d. In the fourth year, the coal production are 2,117,718.28 tons, overburden removal amount is 23,926,907.16 BCM with 11,3:1 stripping ratio.

The total amount of production for four years was 8.3 million tons, with stripping ratio average of all mining is 12:1. Overburden deposited in two stacks waste dump that located in the South East of pit. While the inpit dump is inside the North East mining pit. There are several mining equipments used in Lysat 2 block. First, for overburden stripping used Komatsu bulldozer D375A-5. Second, excavator that will be used to dig and load overburden material is 2500-5 Hitachi. Third, the excavator that will be used to dig and load coal is PC300SE-7 Komatsu. Fourth, transport equipment that will be used to haul the overburden dump trucks Komatsu HD785-7 and the haulage unit that will be used to transport coal is ZY1EWPD Hino dump truck.