

ABSTRACT

PT.Petrosea site Santan Batubara has a production target for digging overburden in the amount of 580.000 BCM/Month in Pit S. Mining operation use 1 unit excavator backhoe Liebherr 9250 Litronic and 4 units Dumptruck Caterpillar 777D. Actually, Backhoe can produce overburden just 559.750 BCM/Month and Dumptruck just produce BCM/Month. So, actual production has not been enough to suffice the production target. That problem is happening because much time is wasted because of barriers to work. The barriers make reduce effective work time and work efficiency is reduced.

To increase production of overburden, the company has to increase effective time, therefore it needs to decrease time barriers and needs to increase quantity of dumptruck to suffice the production target. Besides them, maintenance of hauling road to decrease the dusty problem has to be exchanged so operator's visibility doesn't be disturbed. To solve its problem, the company needs to water the road when the road is dusty.

To increase work efficiency can be done by preventing and reducing the time lost due to the constraints that occur in loading and hauling activities. Reduction of the time constraints are based on the work hours availability. After the suppression of time constraints, the work efficiency of backhoe increased from 73.56% to 76.3% and for dumptruck increased from 72.80% to 75.53%. After that, the company has to add new dumptruck to achieved production targets. With these efforts can increase production :

- Production 9250 Liebherr Litronic backhoe can be increased from 559.750 BCM / month into 580 600 BCM / month.
- Production dumptruck Caterpillar 777D increased from 384.666 BCM / Month into BCM 399.091 / Month
- Production of Dumptruck after the addition of 2 (two) units increased from 399.091 BCM / month to 598.636 BCM / month.