

## ABSTRACT

*Pit RPM is one of the pits located in PT. Rian Pratama Mandiri. PT. RPM is a contractor company which is engaged with coal mining located in Kintap Subdistrict, Tanah Laut District, Kalimantan Selatan Province. Mining system used is surface mining with open pit mining method. Pit RPM planned to increase overburden production to 525 BCM/hours*

*Pit RPM production operation is worked by 3 units of backhoe Doosan S500LC-V with 3,2 m<sup>3</sup> bucket capacity and 10 units of dump truck Hino 700ZS 4141 with 18 m<sup>3</sup> truck capacity. Production calculation showed that production rate for the fleet is 385,00 BCM/jam and tools work match described in match factor is 0,64 for fleet 1; 0,81 for fleet 2 and 0,68 for fleet 3. Overburden production for current condition did not achieve the production target.*

*Factors that affected production have analyzed to increase production rate. Analysis result showed that factor affected production are working condition, loading and digging volume, operation efficiency and tools working match. Production calculation used is queueing theory simulation to obtain more realistic result.*

*Recommendation given to increase production are haul road and loading area fixed based on calculated minimum standard, increase number of passes of bucket to fill hauling from 4 to 5 for claystone material, reduce mechanics and operation delays, and add one hauling unit each for fleet 1 and fleet 3. Production calculated with queue theory based on recommendation given is 534,35 BCM/hours. Match factor changed to 1,02 for fleet 1; 1,00 for fleet 2 and 0,92 for fleet 3. Production with recommendation used is able to achieve the production target.*

*Keywords: Overburden Production, Digging-Loading Tool, Hauling Tool, Queueing Simulation*