

## RINGKASAN

PT. Feron Tambang Kalimantan merupakan salah satu perusahaan tambang bijih besi (*hematite*) yang terletak di Kabupaten Kotawaringin Timur, Kalimantan Tengah. Kegiatan penambangan bijih besi, PT. Feron Tambang Kalimantan menggunakan sistem tambang terbuka (*Surface Mining*) dengan metode penambangan *open cut*. Target produksi pemuatan Bijih Besi dari *stockyard* ke tongkang sebesar 6.500 ton/hari.

Waktu kerja yang tersedia 828 menit/hari. Waktu kerja efektif *backhoe Hitachi Zaxis-330* adalah 629 menit/hari (75%) dan waktu kerja efektif *dumptruk Hino FM 260 JD* adalah 619 menit/hari (75%). Kegiatan produksi alat muat *backhoe Hitachi Zaxis-330* sebesar 5.524,17 ton/hari sedangkan jumlah produksi 3 unit alat angkut *dumptruck Hino FM 260 JD* sebesar 4.152,25 ton/hari. Keserasian alat antara 1 alat muat dan 3 alat angkut adalah 0,76. Waktu tunggu alat muat *backhoe Hitachi Zaxis-330* 0,37 menit.

Pencapaian target produksi dilakukan dengan dua alternatif. Alternatif pertama dengan penambahan alat dan alternatif kedua dengan penambahan waktu kerja. Hasil pencapaian produksi pada kedua alternatif tersebut adalah:

1. Alternative pertama penambahan terhadap beban muatan yang awalnya 4 *bucket* menjadi 5 *bucket*. Peningkatan waktu kerja efektif dan efisiensi alat angkut yang mulanya 619 menit /hari (75%) menjadi 634,80 menit/hari (76%). Penambahan unit alat angkut yaitu 1 unit menjadi 4 unit. Produksi mengalami kenaikan dari 4.152,25 ton/hari menjadi 7.280,56 ton/hari. Target produksi PT Feron Tambang Kalimantan sebesar 6.500 ton/hari sudah tercapai. Keserasian alat antara alat muat dan alat angkut mengalami perubahan dikarenakan adanya penambahan alat angkut dan penambahan beban muatan pada alat angkut. Keserasian alat antara 2 alat muat dan 4 alat angkut dari 0,76 menjadi 0,63. Sedangkan waktu tunggu alat muat yang semula 0,37 menit menjadi 0,84 menit.
2. Alternatif kedua penambahan waktu jam kerja yang semula 828 menit/hari menjadi 948 menit/hari. Penambahan beban muatan yang awalnya 4 *bucket* menjadi 5 *bucket*. Peningkatan waktu kerja efektif dan efisiensi alat angkut yang mulanya 619 menit /hari (75%) menjadi 754,80 menit/hari (79%). Produksi mengalami kenaikan dari 4.152,25 ton/hari menjadi 6.706,40 ton/hari. Target produksi PT Feron Tambang Kalimantan sebesar 6.500 ton/hari sudah tercapai. Keserasian alat antara alat muat dan alat angkut mengalami perubahan dikarenakan adanya penambahan waktu kerja dan penambahan beban muatan pada alat angkut. Keserasian alat antara 1 alat muat dan 3 alat angkut dari 0,76 menjadi 0,94. Sedangkan waktu tunggu alat muat yang semula 0,37 menit menjadi 0,073 menit.

## ABSTRACT

*PT Feron Tambang Kalimantan is one of the companies mining iron ore (hematite). PT Feron Tambang Kalimantan is located in East Kotawaringin, Central Kalimantan. The activities of iron ore mining activities PT Feron Tambang Kalimantan using Surface Mining system with the open cut mining methods. The Production target of Iron ore mining 6,500 tons/day.*

*The available working time is 828 minutes/day. The effective working time backhoe Hitachi Zaxis-330 is 629 minutes/day (75%) and the effective working time dumptruck Hino FM 260 JD is 619 minutes/day (75%). the production 1 unit of backhoe Hitachi Zaxis-330 is 5,524.17 tons/day. The production of 3 units of dumptruck Hino FM 260 JD is 4,152.25 tons/day. Match Factor between 1 unit of backhoe and 3 units of dumptruck is 0.76. The waiting time backhoe is 0.37 minutes.*

*Production target done with two alternative. The first alternative is addition unit dumptruck and backhoe, and the second alternative with addition working hours. The result on both production of the alternative is:*

- 1. First alternative is increase in load which previously 4 becomes 5 bucket bucket. The increase in the effective working time and efficiency of dumptruck which initially 619 minutes/day (75%) to 634.80 minutes/day (75%). Addition unit dumptruck which is 1 units to 4 units. Production increased from 4,152.25 tons/day to 7,280.56 tons/day. The production target of PT Feron Tambang Kalimantan 6,500 tons / day has been reached. Match Factor 2 units of backhoe and 4 units of dumptruck has change, because the addition of dumptruck and increase in load on the dumptruck. Match Factor between 2 units of backhoe and 4 units of dumptruck from 0.76 to 0.63. While waiting time unloading tool that was originally 0.37 minutes to 0.84 minutes.*
- 2. Second alternative addition working hours that was originally 828 minutes/day to 948 minutes/day. Increase in load load which previously 4 becomes 5 bucket bucket. The increase in the effective working time and efficiency of dumptruck which initially 619 minutes/day (75%) to 754.80 minutes/day (79%). Production increased from 4,152.25 tons/day to 6,706.40 tons/day. The production target of PT Feron Tambang Kalimantan 6,500 tons / day has been reached. Match Factor 1 units of backhoe and 3 units of dumptruck has change, because the addition working hours and increase in load on the dumptruck. Match Factor between 1 units of backhoe and 3 units of dumptruck from 0.76 to 0.94. While waiting time unloading tool that was originally 0.37 minutes to 0.073 minutes.*