

ABSTRAK
RANCANGAN *MINE SEQUENCE* PER WEEKLY
BERDASARKAN EKSISTING ALAT MEKANIS DI *PIT*
KOREA PT UBPB ANTAM TBK

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Penelitian ini dilakukan di PT Unit Bisnis Penambangan Bauksit (PT ANTAM), sebuah perusahaan pertambangan bijih bauksit. PT ANTAM sedang merencanakan penambangan di *pit* Korea merupakan salah satu area yang direncanakan akan ditambang, sehingga diperlukan perancangan kemajuan penambangan dalam satuan waktu setiap pekan yang disesuaikan dengan sasaran produksi sebesar 24.000 ton per pekan. Tujuan penelitian ini adalah untuk merancang kemajuan penambangan, area timbunan (*waste dump area*), serta menentukan kebutuhan alat mekanis berdasarkan sasaran produksi setiap pekan. Metode yang digunakan meliputi studi literatur, observasi lapangan, serta pengumpulan dan analisis data primer dan sekunder. Data primer terdiri dari waktu edar dan jenis alat mekanis, sedangkan data sekunder meliputi data *Block model*, sasaran produksi, rekomendasi geoteknik, dan spesifikasi alat. Hasil penelitian berupa rancangan kemajuan penambangan dari bulan September hingga Oktober, dengan sasaran produksi bijih bauksit 24.000 ton CBX dan waste 51.000 ton. Rancangan area timbunan dirancang untuk menampung volume 189.216 BCM dengan kombinasi metode end dump. Kebutuhan alat mekanis ditentukan berdasarkan sasaran produksi setiap pekan, dengan jumlah 1 alat *backhoe* Hitachi ZX490LC-7G, 1 alat *backhoe* Komatsu PC 300 untuk pemuatan bijih bauksit, 5-6 alat truk jungkit HINO JD 500 FM 260 dan alat penimbunan kembali menggunakan kombinasi *backhoe* Komatsu PC200 dan *Bulldozer* Komatsu D85ESS-2. Hasil ini diharapkan dapat menjadi acuan dalam optimalisasi kegiatan penambangan agar sasaran produksi dapat tercapai secara efektif dan efisien.

Kata kunci: alat mekanis, area timbunan, kemajuan penambangan, *mine sequence*, sasaran produksi.

ABSTRACT
WEEKLY DESIGNED MINING SEQUENCE BASED ON
EXISTING MECHANICAL EQUIPMENT IN THE KOREA PIT
OF PT UBPB ANTAM TBK

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This study was conducted at PT ANTAM Tbk – Bauxite Mining Business Unit, a bauxite ore mining company. PT ANTAM is planning mining activities at the Korea Pit, which is one of the areas scheduled for extraction; therefore, a weekly mining advance plan aligned with a production target of 24,000 tons per week is required. The objectives of this study are to design the mining advance, determine the waste dump area, and calculate the required mechanical equipment based on the weekly production target. The research methods include literature review, field observation, and the collection and analysis of primary and secondary data. Primary data consist of equipment cycle time and types of mechanical equipment, while secondary data include block model data, production targets, geotechnical recommendations, and equipment specifications. The results of this study produce a mining advance plan from September to October, with production targets of 24,000 tons of CBX bauxite ore and 51,000 tons of waste. The waste dump area is designed to accommodate a volume of 189,216 BCM using a combination of end-dump methods. The required mechanical equipment is determined based on weekly production targets, consisting of one Hitachi ZX490LC-7G backhoe and one Komatsu PC300 backhoe for bauxite loading, 5–6 units of HINO JD 500 FM 260 dump trucks for hauling, and backfilling equipment using a combination of a Komatsu PC200 backhoe and a Komatsu D85ESS-2 bulldozer. These results are expected to serve as a reference for optimizing mining operations to ensure that production targets are achieved effectively and efficiently.

Keywords: mechanical equipment, mine sequence, mine development, production target, waste dump.