

ABSTRAK

RANCANGAN TEKNIS KEMAJUAN PENAMBANGAN BATUBARA DI PIT UTARA PT BANYAN KOALINDO LESTARI

Oleh
Akbar Ardiansyah
NIM: 112200106
(Program Studi Sarjana Teknik Pertambangan)

Kegiatan penambangan batubara dengan metode tambang terbuka memerlukan perencanaan kemajuan penambangan yang terarah agar target produksi dapat tercapai secara efektif dan terkendali. Pit Utara PT Banyan Koalindo Lestari merupakan salah satu area penambangan aktif yang memerlukan perencanaan kemajuan penambangan jangka pendek sebagai acuan pelaksanaan kegiatan produksi. Penelitian ini bertujuan untuk menyusun rancangan teknis kemajuan penambangan batubara selama periode tiga bulan, yaitu Juli-September, merancang disposal selama periode tiga bulan, serta menentukan kebutuhan alat gali-muat dan alat angkut guna mendukung pencapaian target produksi perusahaan. Penelitian ini merupakan penelitian terapan dengan pendekatan perancangan teknis, dengan pengumpulan data melalui studi literatur, pengamatan lapangan, serta pengolahan data topografi, geologi, dan produksi perusahaan. Target produksi yang digunakan sebagai dasar perencanaan adalah batubara 65.000 ton/bulan dengan volume tanah penutup sebesar 350.000 bcm/bulan. Hasil penelitian menunjukkan bahwa desain rancangan mampu memenuhi target produksi, dengan rencana pengupasan overburden pada bulan Juli sebesar 373.701,49 bcm dan produksi batubara sebesar 70.051,82 ton dengan stripping ratio 5,3 pada bulan Agustus sebesar 372.565,16 bcm dan produksi batubara sebesar 71.394,15 ton dengan stripping ratio 5,2 pada bulan September sebesar 371.735,12 bcm dan produksi batubara sebesar 70.201,04 dengan stripping ratio 5,3. Rancangan disposal direncanakan mampu menampung total volume overburden sebesar 1.050.000 bcm selama periode perencanaan. Penelitian ini menyimpulkan bahwa rancangan teknis kemajuan penambangan yang disusun dapat digunakan sebagai acuan operasional dalam upaya pencapaian target produksi batubara di Pit Utara PT Banyan Koalindo Lestari.

Kata kunci: perencanaan tambang, kemajuan penambangan, tambang terbuka, target produksi.

ABSTRACT

TECHNICAL DESIGN OF COAL MINING ADVANCEMENT AT THE NORTH PIT OF PT BANYAN KOALINDO LESTARI

By

Akbar Ardiansyah

NIM: 112200106

(Mining Engineering Undergraduated Program)

Coal Open-pit coal mining requires a well-planned and systematic mine advancement strategy to ensure that production targets are achieved efficiently and remain well controlled. The North Pit of PT Banyan Koalindo Lestari is an active mining area that requires a short-term mine development plan to guide ongoing production activities. This study aims to develop a technical design for mine advancement over a three-month period (July–September), including the design of the disposal area and the estimation of loading and hauling equipment requirements to support the company's production targets. This research is applied in nature and adopts a technical design approach. Data collection was carried out through literature review, field observations, and the processing of topographic, geological, and company production data. The production targets used as the basis for planning are 65,000 tons of coal per month and 350,000 bcm of overburden per month. The results show that the proposed design is capable of meeting these targets. In July, planned overburden removal reaches 373,701.49 bcm, with coal production of 70,051.82 tons and a stripping ratio of 5.3. In August, overburden removal is 372,565.16 bcm, with coal production of 71,394.15 tons and a stripping ratio of 5.2. In September, overburden removal is 371,735.12 bcm, with coal production of 70,201.04 tons and a stripping ratio of 5.3. The disposal design is planned to accommodate a total overburden volume of 1,050,000 bcm during the three-month period. Overall, the study concludes that the proposed mine advancement design can be used as a practical operational reference to support the achievement of coal production targets at the North Pit of PT Banyan Koalindo Lestari.

Keywords: mine planning, mine advancement, open-pit mining, production targets.