RINGKASAN

PT. Bhumi Rantau Energi (BRE) adalah perusahaan tambang batubara di Indonesia yang beroperasi di Kecamatan Lokpaikat, Kabupaten Tapin, Provinsi Kalimantan Selatan. Perusahaan ini memiliki 2 jenis produk batubara, yaitu produk G (HRS) hasil dari *crusher* dua dan tujuh dan produk G (KPP) hasil dari *crusher* satu dan tiga. Penelitian ini bertujuan untuk menganalisis penyebab perbedaan kualitas produk batubara G (KPP) dan merancang pencampuran batubara serta menganalisis persebaran ritase untuk pemenuhan rencana pencampuran batubara.

Metodologi yang digunakan meliputi studi literatur, dilanjutkan pengambilan data primer dan data sekunder, lalu data dianalisis dan diolah sehingga diperoleh kesimpulan. Data primer pada penelitian ini berupa pengambilan sampe batubara di *stockpile*, pengujian kualitas batubara, dan uji petik produktivitas *crusher*. Data sekunder meliputi Kualitas *seam* batubara, data rencana pencampuran batubara oleh perusahaan, data timbangan ritase 3 bulan terakhir, data curah hujan, dan *coal getting* harian. Analisis rencana pencampuran batubara perusahaan dan rancangan rencana pencampuran batubara dilakukan menggunakan perangkat lunak *Microsoft Excel.*

Setelah dilakukan analisis, ditemukan penyebab perbedaan kualitas produk G (KPP) yaitu karena perbedaan produktivitas pada *crusher* satu dan tiga, serta perencanaan yang tidak merata dan hanya memaksimalkan produksi pada *crusher* satu. Hal ini menyebabkan perbedaan kualitas antara lain selisih kandungan abu (*ash)* berkisar dari 0,00% - 1,22%, selisih *inherent moisture* (IM) berkisar dari 0,00% - 1,42%, selisih *total moisture* (TM) berkisar dari 0,00% - 0,81%, dan selisih *calorific value* (CV) berkisar dari 0 Kcal/kg – 47 Kcal/kg. Pada rancangan pencampuran batubara, ditambahkan penyelesaian secara matematis agar mendapatkan kualitas yang merata pada *crusher* satu dan tiga.

Pada kegiatan *coal getting* harian menggunakan *dump truck* HINO 500 dengan kapasitas rata-rata 26,473 Mt, menjadi acuan untuk menentukan persebaran ritase. Sebelumnya pada rencana pencampuran batubara perusahaan memerlukan sebanyak 6.928 ritase pada *crusher* satu dan sebanyak 3.039 ritase pada *crusher* tiga. Sedangkan hasil rancangan rencana pencampuran batubara, diperlukan sebanyak 7.023 ritase pada *crusher* satu dan sebanyak 2.945 ritase pada *crusher* tiga.

SUMMARY

PT. Bhumi Rantau Energi (BRE) is a coal mining company in Indonesia that operates in Lokpaikat District, Tapin Regency, South Kalimantan Province. The company produces two types of coal products: G (HRS) products derived from crushers two and seven, and G (KPP) products derived from crushers one and three. This study aims to analyze the causes of quality variations in G (KPP) coal products, to design an optimized coal blending plan, and to analyze the distribution of hauling trips (ritase) required to achieve the blending targets.

The research methodology consisted of a literature review, followed by the collection of both primary and secondary data, which were subsequently analyzed and processed to draw conclusions. The primary data included coal sampling at the stockpile, coal quality testing, and spot checks of crusher productivity. The secondary data comprised seam coal quality information, the company's existing blending plan, truck scale data for the past three months, rainfall data, and daily coal getting records. The analysis of the company's blending plan and the development of the new coal blending design were performed using Microsoft Excel.

The results of the analysis indicated that the quality differences in G (KPP) products were caused by disparities in productivity between crushers one and three, as well as uneven production planning that prioritized crusher one. This led to quality variations, including differences in ash content ranging from 0.00% to 1.22%, inherent moisture (IM) from 0.00% to 1.42%, total moisture (TM) from 0.00% to 0.81%, and calorific value (CV) from 0 Kcal/kg to 47 Kcal/kg. In the blending design stage, a mathematical approach was incorporated to ensure more uniform quality between the two crushers.

In daily coal getting operations, HINO 500 dump trucks with an average capacity of 26.473 Mt were used as the basis for determining the distribution of hauling trips. In the company's initial blending plan, 6,928 trips were allocated to crusher one and 3,039 trips to crusher three. In contrast, the proposed blending plan requires 7,023 trips for crusher one and 2,945 trips for crusher three.