RINGKASAN

PT Manggala Usaha Manunggal (MUM) merupakan anak perusahaan dari PT Titan Group bergerak di bidang kontraktor pertambangan. Lokasi penelitian berada di *jobsite* PT Mustika Indah Permai (MIP), Kabupaten Lahat, Provinsi Sumatera Selatan. Lokasi penelitian memiliki satu *pit* penambangan aktif yaitu *pit* Sungkai.

Penambangan batubara di lokasi penelitian menggunakan sistem tambang terbuka dengan metode *open pit*, sehingga membentuk jenjang-jenjang lereng tambang. Menurut Keputusan Menteri Energi, Sumber Daya dan Mineral No.1827/K/30/MEM Tahun 2018 Tentang Pedoman Pelaksanaan Kaidah Teknik Pertambangan Yang Baik dan Benar dalam penentuan lereng aman atau tidak harus berdasarkan faktor keamanan (FK) dan probabilitas longsor (PL).

Analisis kestabilan lereng ini diharapkan dapat memberikan hasil berupa rekomendasi geometri lereng yang aman berdasarkan nilai faktor keamanan lereng yang telah ditentukan (FK ≥ 1,3) dan nilai probabilitas longsor (PL ≤ 20%) sesuai Kepmen ESDM No.1827/K/30/MEM Tahun 2018.

Berdasarkan analisis yang dilakukan Lereng yang dikategorikan aman menurut Kepmen ESDM no.1827/K/30/MEM tahun 2018 dengan FK ≥ 1,3 dan PL ≤ 20 % dengan *ru coefficient* 0,75 adalah lereng *high wall* di *section* A (FK = 1,64 ; PL = 0%) , dan *section* C (FK = 1,3 ; PL = 16,67%), sedangkan lereng yang dikategorikan tidak aman yaitu lereng *high wall* di *section* B (FK = 1,07 ; PL = 36,67%). Dilakukan perancangan ulang pada lereng yang dikategorikan tidak aman dengan alternatif menaikkan elevasi *pit bottom* sebesar 20 m dan menurunkan kemiringan lereng keseluruhan sebesar 2°. Memasang *horizontal drains hole* pada dinding lereng.

ABSTRACT

PT Manggala Usaha Manunggal (MUM) is a subsidiary of PT Titan Group engaged in mining contractors. The research location is at the PT Mustika Indah Permai (MIP) job site, Lahat Regency, South Sumatra Province. The research location has one active mining pit, namely Sungkai pit.

Coal mining in the research location uses an open pit mining system, so as to form tiers of mine slopes. According to the Decree of the Minister of Energy, Resources and Minerals No.1827/K/30/MEM of 2018 concerning Guidelines for the Implementation of Good and Correct Mining Engineering Principles in determining whether a slope is safe or not, it must be based on the safety factor (FK) and landslide probability (PL).

This slope stability analysis is expected to provide results in the form of safe slope geometry recommendations based on predetermined slope safety factor values (FK ≥ 1.3) and landslide probability values (PL ≤ 20%) according to Minister of Energy and Mineral Resources Decree No.1827/K/30/MEM of 2018.

Based on the analysis conducted, slopes that are categorized as safe according to Minister of Energy and Mineral Resources Decree no.1827/K/30/MEM of 2018 with FK ≥ 1.3 and PL ≤ 20% with a ru coefficient of 0.75 are high wall slopes in section A (FK = 1.64 ; PL = 0%), and section C (FK = 1.3; PL = 16.67%), while slopes that are categorized as unsafe are high wall slopes in section B (FK = 1.07 ; PL = 36.67%). Redesigned slopes that are categorized as unsafe with an alternative of increasing the pit bottom elevation by 20 m and decreasing the overall slope by 2°. Installing horizontal drains holes on slope walls.