RINGKASAN

PT. Saptaindra Sejati *Jobsite* Boro adalah salah satu perusahaan kontraktor pertambangan batubara yang terletak di Kabupaten Tanah Bumbu, Kalimantan Selatan. Dengan adanya kemajuan penambangan pada Section A-A' dan Section B-B' yang memiliki geometri lereng dengan kedalaman antara 13 – 25 m dan sudut lereng keseluruhan 13^0 - 37^0, sehingga perlu dilakukannya analisis kestabilan lereng.

Perhitungan faktor keamanan menggunakan metode kesetimbangan batas pada dinding highwall yang berpotensi longsoran busur mnggunakan metode Bishop sedangkan dinding lowwall yang berpotensi longsoran bidang menggunakan metode Mogenstern-Price, Analisis probabilistik serta dengan pendekatan perhitungan kriteria keruntuhan Mohr Coulomb. Permodelan dilakukan dengan pendekatan sifat fisik dan mekanik batuan hasil uji laboratorium. Analisis lereng keseluruhan menggunakan kondisi muka air tanah kering, 8H, 4H, 2H, dan jenuh menurut *Hoek&Bray (1981*), faktor seismik bernilai 0,03g dengan asumsi beban alat mekanis diabaikan. Lereng kesluruhan dianggap stabil apabila FK >1,3 (sesuai dengan Keputusan Menteri Energi dan Sumber Daya Mineral Republik Indonesia No. 1827 K/30/MEM/2018)

Berdasarkan analisis menggunakan metode kesetimbangan batas dengan program Rocsciense Slide V.6 didapatkan alternatif geometri lereng dengan asumsi kondisi muka air tanah kering, jenuh, 8H, 4H, dan 2H. Pada *Section* A-A' *Highwall* sudut lereng keseluruhan 19^0, tinggi lereng 24 m, kondisi muka air tanh jenuh dengan PL 1,2%. *Lowwall* sudut lereng keseluruhan 48^0, tinggi lereng 13 m dengan PL 0% . Pada *Section* B-B' *Highwall* sudut lereng keseluruhan 15^0, tinggi lereng 25 m, kondisi muka air tanah jenuh dengan PL 3,3%. *Lowwall* sudut lereng keseluruhan 45^0, tinggi lereng 25 m dengan PL 0% pada kondisi muka air tanah jenuh .

ABSTRACT

PT Saptaindra Sejati is one of the coal mining contracting companies located in Tanah Bumbu District, South Kalimantan. The progress of mining to the west on Section A-A' and Section B-B' which has the geometry of the slope with a depth between 13 - 25 m and an overall slope angle of 13^0 - 37^0, so it is necessary to analyze slope stability.

Safety factor calculations us the limit equilibrium method, on highwall which has the potential for circular failure using the Bishop method while lowwall which has the potential of non-circular failure using the Morgenstern Price method, probabilistic analisys and the approach to calculating mohr-coulomb's failure criteria. Modlling is done by approaching the physical and mechanical properties of rock from laboratory test result. Ovrall slope analysis uses ground water level conditions dry, 8H, 4H,2H, and saturated according to Hoek & Bray (1981), seismic factors are valued at 0,03g and assuming the burden of mchanical device is ignored. The overall slope is stable if FK>1,3 (according to the Decree of the Minister of Energy and Minral Resources of the Republic of Indonesia No. 1827 K/30/MEM/2018).

Based on the analysis using the limit equilibrium methods with Rocsciense Slide V.6 program, the geometry of slope alternative is obtainedwith the assumption of dry, saturated, 8H, 4H, and 2H groundwater conditions. In Section A-A' Highwall overall slope is 19^0, slope height 24 m, ground water condition saturated with PoF 1,2%. Lowwall overall slope is 48^0, slope height 13 m with PoF0%. In Section B-B' Highwall overall slope is 15^0, slope height 25 m, ground water condition saturated with PoF 3,3%. Lowwall overall slope is 45^0, slope height 25 m with PoF 0%, grounf water saturated .