

## ABSTRAK

Lokasi penelitian berada di wilayah PT. Indo Muro Kencana. PT. Indo Muro Kencana merupakan perusahaan tambang emas yang menerapkan sistem tambang terbuka untuk menambang bijih emas berdasarkan kondisi geologi dan daerah mineralisasi emas. Dari sistem penambangan ini mengakibatkan permukaan tanah tidak teratur yang membentuk lereng-lereng terjal dan tidak stabil yang dapat menimbulkan kelongsoran. Penelitian dilakukan dengan cara pemetaan lapangan serta mengambil beberapa sampel data untuk di analisis di laboratorium. Berdasarkan pemetaan lapangan, morfologi daerah penelitian terbagi menjadi 4 bentuk lahan yaitu bukit structural (S1) dan perbukitan structural (S2) yang keduanya dikontrol oleh struktur geologi yang berkembang serta lahan bukaan tambang (A1) dan bukit DISPOSAL. Stratigrafi daerah penelitian tersusun atas tiga satuan batuan dari tua ke muda yaitu satuan lava andesit dari formasi gunungapi malasan, satuan lava basalt dari formasi gunungapi malasan, dan satuan DISPOSAL yang berisi material sisa tambang yang tidak mempunyai nilai ekonomis. Daerah penelitian dikontrol oleh struktur berupa sesar mendatar kanan dengan arah NW-SE, sesar kiri naik dengan arah NE-SW, sesar kiri turun dengan arah NW-SE, dan kekar dengan arah tegasan utamanya berarah NW-SE.

Dalam analisis kinematik kestabilan lereng menurut Wylie dan Mah (2005), daerah penelitian mempunyai 3 probabilitas tipe kelongsoran yaitu longsoran bidang, baji, dan toppling. Semua lereng mempunyai kemungkinan terjadi longsoran baji dengan persentase 10,03% - 39,25% serta hanya lereng scanline 1, 2, dan 5 yang mempunyai kemungkinan longsoran planar dengan persentase 6,38% - 13,73% dan hanya lereng 1 yg memungkinkan dapat terjadi longsoran toppling dengan persentase 1,96%.

Kata Kunci : Analisis Kinematik, Muaratewe, Emas, Kestabilan lereng, Scanline.

## **ABSTRACT**

*The research location is in the PT. Indo Muro Kencana. PT. Indo Muro Kencana is a gold mining company that applies an open mining system to mine gold ore based on geological conditions and gold mineralization areas. This development system results in irregular ground surfaces that form steep and unstable slopes that can cause landslides. The research was carried out by field mapping and taking several data samples for analysis in the laboratory. Based on field mapping, the morphology of the research area is divided into 4 land forms, namely structural hill (S1) and structural hills (S2), both of which are controlled by the developing geological structure as well as mine openings (A1) and disposal hills. The stratigraphy of the research area is composed of three rock units from old to young, namely the andesite lava unit from the Malasan volcanic formation, the basalt lava unit from the Malasan volcanic formation, and the disposal unit containing mining waste material that has no economic value. The research area is controlled by structures in the form of a right slip fault in a NW-SE direction, a normal left slip fault in a NE-SW direction, a reverse left slip fault in a NW-SE direction, and a joint with the main stress direction in a NW-SE direction.*

*In the kinematic analysis of slope stability according to Wylie and Mah (2005), the research area has 3 probabilities of landslide types, namely plane, wedge and toppling landslides. All slopes have a possibility of wedge landslides with a percentage of 10.03% - 39.25% and only slopes 1, 2, and 5 have a possibility of planar landslides with a percentage of 6.38% - 13.73% and only slope 1 has it is possible for a toppling landslides to occur with a percentage of 1.96%.*

*Keywords : Kinematic analysis, Muaratewe, Gold, Slope stability, Scanline.*