

ABSTRAK

The Trans Halmahera highway section 17-22 km is part of the Sofifi City and Cetrul Halmahera Regencies located in the North Oba District. The Trans Halmaheraroad section often landslides.

This research was conducted by disturbing, undisturbed, rock mass rating and Markland sampling methods. From disturbed and undisturbed sampling analysis shows the mechanical character of the soil; value of density, moisture content, atterberg limit, specific gravity, porosity, permeability and slope safety where the landslide control factor is due to soil permeability where LP-09, LP-14 has permeability rates ranging from 3,34% to $4,156 \times 10^{-4}$ cm/s in line with the percentage of high water content decreases tp 21,87% in LP-12.

In the estimation of rock mass rating on the rock slope it is found that the middle class category (III) LP-12, LP-09 category of very good class (I) and LP-14 can potentially block glide type avalanches (unstable slopes). Based on fracture measurements, through a comparison of the general direction of fault, mass and ground movement, it can be seen that the ground movement that occurs has a general direction that is relatively the same as the general direction of the fault or the thickness of the study area. So it can be concluded that in addition to being influenced by external factors such as climate, environment, or natural factors, the geological structure that develops in the study area is very influential on the ground movement that occurs.

Keywords: *Trans Halmahera road section, landslides, soil mechanics, geological structure influence*