

Abstract

The aim of this diploma thesis is to study the engineer geological aspects in a landslide area near Svrčinovec in Slovakia (Čadca region). The mapping of monitored area was performed in autumn 2016 for constructing the engineer geological map. Forty documental points were made to construct the map. The map was constructed in PC software AutoCAD in the scale 1:5000. The map legend is attached. Eight reconstituted soil samples from different places in the monitored area were collected in the summer 2015. Two of them were selected to perform a laboratory analysis using shear translational and rotational machine. The aim of a laboratory analysis was to find out a critical and residual angle of friction of the soils. Obtained results were used in the mathematical model of the potential landslide slope. The PC software GEO5 was used for mathematical model construction and the stability of the slope was calculated. Summary of the results concerning the slope stability and stabilization arrangements are mentioned at the end of the thesis.