

## **STUDY OF A LARGE SOIL AND ROCK SLIDE IN THE BORDER OF BASALTIC SCARPMENT IN THE REGION OF MALHADA, BRAZIL**

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This research presents the study of an active instability process in a slope along the border of basaltic plateau over sedimentary deposits. This phenomenon is related to the evolutionary process of basaltic escarpment. In 1993, in the region of Malhada, near the town of Santa Cruz do Sul - Rio Grande do Sul, Brazil, a large slide occurred in the border of basaltic escarpment. At present, there is a huge chasm in rock with approximately 25 to 30 meters deep, 40 meters wide and more than 300 meters long. The base of the slope is formed by clayey silts (Santa Maria Formation). Over these, there are layers of silty sands (Botucatu Formation), which in turn are covered by the basaltic flows (Serra Geral Formation). There are colluviums in the lower part of the which have moved more than 15 meters horizontally. The total area affected is around 60 hectares. The study has started with a topographic survey. After this, it was performed a geological and geophysical survey and the monitoring of slope movements with superficial benchmarks and with inclinometers. This research is intended to gather knowledge on the regional slope instability phenomena taking into account the importance of these phenomena to the cities of this region and considering the peculiar geological characteristics of the site.