

## ASPECTS OF THE GEOMETRY OF DEEP SEATED GRAVITATIONAL SLOPE DEFORMATIONS. EXAMPLES FROM THE EASTERN ALPS. WE KNOW MANY DETAILS BUT WE KNOW A VIEW OF THEM ONLY

Siegfried W. Hermann, Peter Ramspacher, Gunter Riedmüller and Arnold Steidl

In the Eastern Alps large scale gravitational slope deformations (DGSDs) have been recognised usually only by coincidence during building and mining activities. Thereby knowledge of principle morphological characteristics has become well known since the outcome of older descriptions (e.g. AMPFERER, 1939; ZISCHINSKY, 1966). Until recently, the descriptions by these early authors have been used as the basis for the identification of both dormant and active DGSDs. In contrast, subsurface information is singular, therefore the interpretations of the mechanics of DGSD have been gathered by surface data only. However, less than about 40 sites have been studied to some extent with respect to their rheological behaviour.

In recent projects we have mapped 35 new DGSD sites within a 800 km<sup>2</sup> region in the Wölz mountains (HERMANN et al., 2000), indicating that several hundreds of DGSDs remain undiscovered in the Eastern Alps.

Here, we present some ideas on the mechanics of DGSD formation using structural geological methods we have shown to be successful at several sites in the crystalline basement of the Wölz region. Our interpretations on the deformation geometry of DGSD collected from the hanging wall mass of several sites fit with detailed documentation of the localisation of the basal displacement surfaces, accepted from the site “Rosone” (BARLA and CHIRIOTTI, 1995) and the site “Kaponig” (KNOLL et al., 1994; RAMSPACHER et al., 2000).

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### Authors' addresses:

Dr. Siegfried Willibald Hermann, Institute of Geology and Paleontology, Karl-Franzens University of Graz, Heinrichstrasse 26, A-8010 Graz, Austria; Dr. Peter Ramspacher, Institut für Hydrogeologie und Geothermie, Joanneum Research Forschungsgesellschaft mbH, Elisabethstrasse 16/II, A-8010 Graz, Austria; Dr. Gunter Riedmüller, Institute of Engineering Geology and Applied Mineralogy, Graz University of Technology, Rechbauerstrasse 12, A-8010 Graz, Austria; Mag. Arnold Steidl, Gruppe Geotechnik Graz ZT GmbH, Elisabethstrasse 22/II, A-8010 Graz, Austria