Geophysical Research Abstracts, Vol. 9, 09684, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-09684

Statistical analysis of borehole-datasets near Bátaapáti, South Hungary

Kóródy Gergely(1), Jordán Gyõzõ(2)

1: Department of Palaeontology, Eötvös University, P.O.Box 120, H-1518 Budapest, Hungary. E-mail: gergo16@ludens.elte.hu 2: Geological Institute of Hungary P.O.Box 106, H-1443, Budapest, Hungary

The planned Final Disposal Facility for low and intermediate level radioactive waste of the Paks Nuclear Power Plant has infered extensive geological surveys. Therefore this site abounds in borehole datas suited for executing statistical tests. The claim of this paper is to supervise the older database of the Geological Institute of Hungary, comparing with the new, supervised, unified geological database, as well as to reveal geological structure of the site. Two paleosurface were examined by the borehole datas. The preterciary paleosurface composed of the Palaeozoic Mórágy Granite Formation and Mesozoic carbonates. The prequarter surface mostly checks up with that, somewhere filled with terciary marine sediments. The datas used are the height above sea level of these paleosurfaces in the borehole. Our analysises based on the assumption that datas about homogeneously developed surfaces from databases created based on the same principle are in one-variable tests. Stem&Leaf analysis were made on borehole datas from the differnent databases separatly and all in one. Cummulative histogram illustrated the chance of datas to fall under a certain altitude value. Each tests shows two main population dissolvable 2-4 homogeneous further datasets. The two main population differentiate along 165-175 m in both surface and both database. Plotting on a map the populations constitute cohesive groups. The contour-line dividing these groups concurs the border of the Mórágy Block, so the uplift of this rock body is assumed after the tertiary denudation of the site. The minor inhomogenities dissolve the dataset to 2-4 additional populations. These populations are arranged to regional groups so, these groups overlap geomorphological categories on the geological map of the paleosurfaces. The analysises detach the outliers form the datasets. These outliers are proved to errors by further examinations.