

# Effect of different driving forces in large sedimentary basins

Viktor Balogh, Ádám Tóth, Szilvia Simon  
*József & Erzsébet Tóth Endowed Hydrogeology Chair, Eötvös Loránd University,  
Budapest, Hungary*



## ABSTRACT

Sedimentary basins usually have complex groundwater flow systems, which are driven by different forces. The most frequent driving force is gravity, but overpressure caused by compression and compaction, as well as variable density can also have important effects. In large basins, various effects are present concurrently. Numerical modelling is a perfect tool to recognize and distinguish between these different driving forces. In addition, the geological history of the area is a key factor in understanding the distribution of flow systems. The Great Hungarian Plain, Hungary, is an ideal study area to examine the complexity of flow regimes governed by different driving forces.

This detailed modelling study shows that not only gravity, but compression/compaction and density also influence the active flow paths.

ECHN