1056-41-679 **Julia Petereit*** (jpetereit@unr.edu), University of Nevada, Reno, 1664 N. Virginia St., MS 084, Reno, NV 89557. *Decomposition Method for Henry's Problem.*

Henry's problem is a classic problem in groundwater hydrology. It models the interaction between saltwater and freshwater in confined reservoirs adjacent to the ocean shore.

The traditional semi-analytical solution by Henry to the problem is based on the Fourier-Galerkin technique, which is not very accurate. This causes a difficulty because we are in need of a more accurate analytical solution since currently the Henry's problem is often used to check the validity of numerical codes for variable density flow and transport.

In this presentation we propose an approximate analytical solution to Henry's problem based on a decomposition method. (Received September 15, 2009)