Solution Mining Research Institute Fall 2008 Technical Conference

Galveston, Texas, USA, 13-14 October 2008

On an attempt to simulate the development of fingers and pockets in 3D solution mining modelling using a triangulated cavern surface

Detlef Edler
UGS – Untergrundspeicher- und Geotechnologie-Systeme GmbH, Germany

Aron Beer
Wintershall AG, Kassel

Volker Köckritz
TU Bergakademie Freiberg, Freiberg, Germany

Abstract

A decision was made by the UGS management to make an upgrade on the computer program for 3D modeling of the solution mining process (PROSACAV) with a more use-friendly interface based on an up-to-date and seminal source code. This opportunity was taken to make an attempt for improvements aiming at modelling of finger and pocket development during leaching. The article describes the chosen theoretical approach, some aspects of the implementation process and the difficulties to obtain a solution fitting the daily design and engineering requirements.

Key words: Cavern Design, Cavern Development, Cavern Dissolution Modelling, Caverns for Gas Storage, Caverns for Liquid Storage, Computer Modelling, Computer Software