

Modeling and Control of Cavities Development in a Brine Field

by

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Foreword

The rocksalt deposit of Timpa del Salto, located in south of Italy near Belvedere Spinello (CZ), is exploited by means of "Solution Mining" method. Multiple wells method have been used for 20 years. At present in the south and south-east area of the deposit, still unexploited, leaching cavities, produced with solution mining method in single wells, have been designed with the aim of leaving pillars and slab in the rocksalt so that, having taken the rock's mechanical parameters into account, the stability of the cover of soil is assured. The mine technicians control cavity shape using computerized mathematical models implemented on a PC installed in the mine.

These models have been implemented by Mining Italiana S.p.A., SOFREGAZ and ARMINES during a research carried out in the mine of Belvedere Spinello, in collaboration with Montedipe S.p.A., owner of the mine.