## SOLUTION MINING RESEARCH INSTITUTE

1745 Chris Court Deerfield, Illinois 60015-2079 USA Telephone: 847-374-0490 Fax: 847-374-0491 E-mail: bdiamond@mcs.com



# Mapping of Cavity Fields Using the CavMap Program

by

Dr. Andreas Reitze Hartmut von Tryller

SOCON Cavity Control, Inc. Houston, Texas USA

Spring 1998 Meeting New Orleans, Louisiana, USA April 19-22, 1998

#### Contents

#### 1. Introduction

#### 2. CavMap - a program for managing cavity fields

#### 3. Display of cavity fields with CavMap

- 3.1 Data input and organization
- 3.2 Options available in the plan view
- 3.3 Options available in the cross-section view
- 3.4 Analysis of pillars
- 3.5 Mulitlayer technique
- 3.6 Three-dimensional display of cavity fields

#### 4 Use of CavMap to display subsidence

#### 5 Managing cavity operating data with CavMap

- 5.1 Internal database
- 5.2 Integration of external databases and programs
- 5.3 Integration of external graphics and documents

6 Summary and outlook

### Abstract

CavMap is a new software for mapping entire cavity fields and represents one of the four programs which make up the CavInfo series. CavInfo stands for cavity information system and is the name for the new generation of software for displaying cavities, cavity fields and cavity logs on generally available PCs. The professional version of CavMap is suitable for use as an operations information system as it has an open architecture and moreover its functions are specially adapted to cavity fields.

At the beginning of this paper a brief overview about CavInfo and the different programs is given and the general capabilities of the CavMap program are described in more detail. Subsequently it will be shown how cavity fields can be presented with the CavMap program. Using real life examples the various display options for presenting a cavity field in ground plans or in vertical sections are pointed out.

To support rock mechanical investigations CavMap is able to calculate and display the shortest distance between neighbouring cavities. Furthermore the program has the capability to store geological information so that the geology can be added to any vertical section.

Finally the capability of CavMap to create three-dimensional views of cavity fields and the integration of any database into CavMap as well as the interfaces to other programs are presented.

©2023 – Solution Mining Research Institute Full Paper is Available in the SMRI Library(www.solutionmining.org)