

THREE-DIMENSIONAL SOLUTION MINED CAVERN VISUALIZATION

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Introduction

Sonar imaging of solution mined caverns is a valuable tool for the management and assessment of the solution mining process as well as for the periodic inspection of caverns after they have been placed in service. To date, the display of the sonar data has been limited to two-dimensional cross sections and simple isometric line drawings of the caverns. From these images, it may sometimes be difficult to construct a true representation of how the cavern appears in three-dimensions.

A technique for the creation and visualization of fully three-dimensional cavern sonar image models is presented in this paper. The steps required to prepare the model and possible directions for future development are discussed.