

## APPLICATION OF GEOLOGIC MODELING TO OVERBURDEN CHARACTERIZATION AND SPECIAL HANDLING AT A TEXAS LIGNITE MINE<sup>1</sup>

by

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**Abstract.** The U.S. Department of the Interior Office of Surface Mining provides permit reviewers and reclamation specialists with a set of engineering and scientific software tools to assist in the regulation and reclamation of coal mines in the United States. This software is available on unix workstations in Federal, State, and Tribal regulatory agency offices in all coal producing states and is known as the Technical Information Processing System (TIPS). One of these software packages, **earthVision** by Dynamic Graphics, Inc. of Alameda, California, can be used to visualize the three-dimensional characteristics of subsurface overburden units, modeling geologic characteristics such as texture or environmental factors like pH or concentrations of potentially toxic elements. The three-dimensional models allow not only visualization of the subsurface geochemistry, but can be used to accurately estimate the volumes of overburden materials that are potentially acid-forming.

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