

BULLETIN

News from *SubTerra, Inc.*[®]

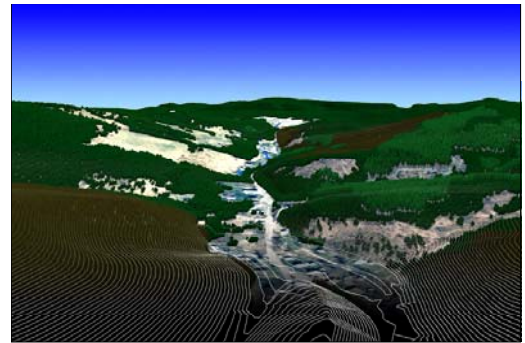
Subsidence Evaluation of Stonemill Creek Area Saltville, Virginia

*U.S. Gypsum Company's Plasterco Mine near Saltville, Virginia was scheduled for permanent closure in 1999. Portions of Route 745 and Stonemill Creek overlie areas of the mine near the outskirts of the predicted subsidence zone. Prior to mine closure, but after all active mining operations ceased, concern that both Route 745 and Stonemill Creek could be subject to subsidence prompted U.S. Gypsum Company to enlist the services of **SubTerra, Inc.** for a subsidence evaluation.*

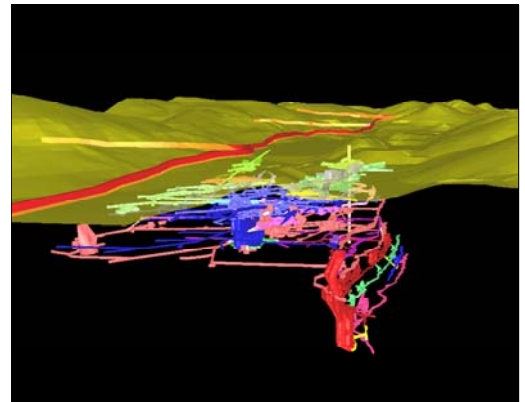
SubTerra performed a comprehensive evaluation of the potential for area subsidence associated with the former mining operation. This included:

- Documentation of expected conditions for the underground workings at closure, and location of the workings relative to the ground surface;
- Identification of potential failure mechanisms, including similarities to (and differences from) prior failure surfaces associated with the mine;
- Prediction of future subsidence;
- Assessment of risks associated with predicted subsidence.

Completing these elements of the evaluation required many steps, beginning with an overall review of available literature, geology reports, and mine plans. Aerial photographs and surface topography of the area were digitized, as were mine plans, in-seam sections



and cross-sections that illustrated mine workings and seam geology.



From the digitized data, a 3-D digital model was constructed to assist with illustrating the potential extent and magnitude of subsidence. Projections of the limits and magnitude of potential sinkhole and trough subsidence were based on analyses using the modeling program FLAC.