



# Mining Engineering Services

CTL Engineering has experienced engineers, geologists, and mining technicians to provide the expertise to insure successful mining operations. We provide abandoned mine land reclamation design and project management, mine subsidence evaluations and remediation plans, hydraulic and hydrology studies, hydrogeologic evaluations, mine permitting, pre-blast surveys, pre and post mining surveys, and coal reserve studies.

The CTL Mining Engineering Group coordinates with our drilling services and various testing departments to provide a full scope of services to the mining industry. Our laboratories are certified to perform the water and overburden analysis prescribed by federal regulatory programs.

CTL Engineering provides drainage control structure design to comply with the regulatory requirements for controlling and treating site damage. Exploration equipment and remote video camera monitoring are used by CTL Engineering to prepare accurate maps for reclamation, subsidence stabilization measures, and mine closures.

We have experienced mechanical and metallurgical engineers on staff to provide mine equipment evaluation and consultation services. CTL Engineering is a proven source for accurate and dependable technical information.

## CTL Engineering Mining Services Include:

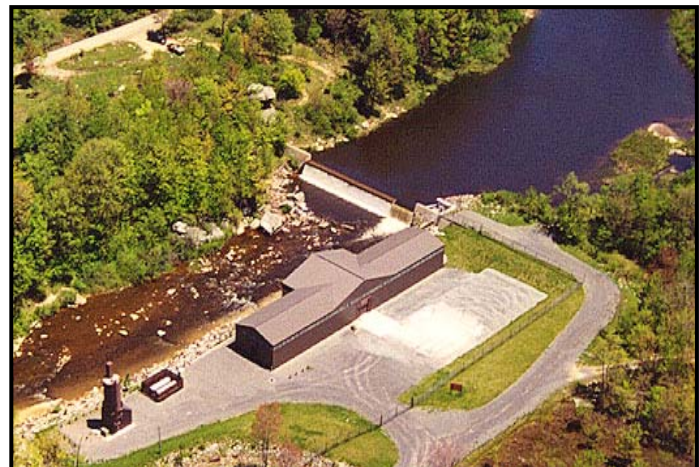
- ◆ **Subsidence Investigations and Stabilization Designs**
- ◆ **Abandoned Mine Reclamation Design**
- ◆ **Permit Preparation**
- ◆ **Mine Design Plans**
- ◆ **Refuse Disposal Plans**
- ◆ **Environmental Monitoring**
- ◆ **Coal, Water, and Overburden Analysis**
- ◆ **Drainage Control Structure Design**
- ◆ **Failure Analysis**
- ◆ **Legal Testimony**
- ◆ **Passive Treatment System Design**



**Taylor Creek Impoundment 2003 OSM National Abandoned Mine Land Reclamation Award Winner**



**Mine Subsidence**



**Blackwater River 1999 OSM Appalachian Regional Award Winner**