

Historic Mining Research in Support of Grout Injection

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In support of the Maryland Department of Natural Resources, Power Plant Research Program (PPRP), the Geospatial Research Group (GRG) at Frostburg State University is collecting and organizing historic mining information for Western Maryland. Such information supports work in Western Maryland and nearby West Virginia regarding the massive use of power plant combustion products for mine restoration. All data collected becomes part of an existing geographical information system. The majority of historic data collected and digitized by the GRG is used by the PPRP for geophysical engineering projects. This historic data comes from a variety of sources including private industry and government agencies. Using a large format scanner each piece of analog data is converted to a digital image and georeferenced, thus giving it real world coordinates. The data exists in a format that allows it to be easily analyzed, edited, and reproduced. Historic data in the database is readily transmitted to engineers for use in planning grout injection projects. Coal elevation data, coal contour data, tunnel orientation, shaft locations, pillar locations of the mine, and other subterranean features are digitized from historic mine data to produce custom maps which best suit the needs of specific projects. This data has proved highly valuable in reducing costs of field investigations, exploratory drilling and geophysical surveys.

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