

VII APPENDICES

APPENDIX A
GLOSSARY

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Abatement - (Mine Drainage Usage) - The lessening of pollution effects of mine drainage.

Alkaline - Having the qualities of a base; i.e., a pH above 7.0.

AMD - Acid Mine Drainage - discharges from abandoned or active deep or surface mines or coal refuse piles containing large amounts of iron, sulfates, acidity formed by oxidation of pyrites.

Aquiclude - A formation which, although porous and capable of absorbing water slowly, will not transmit it fast enough to furnish an appreciable supply for a well or spring.

Aquifer - Stratum or zone below the surface of the earth capable of producing water as from a well.

Backfilling - The transfer of previously moved material back into an excavation such as a mine, ditch, or against a constructed object.

Biota - The animal and plant life of a region collectively.

Butt heading - A drift driven at right angles to the butt cleat.

Bony - Rock that has a high carbon content - usually refers to dark colored coal mining waste material.

Clay Seal - A barrier constructed of impermeable clay that stops the flow of water.

Creep - A squeeze or crush forcing pillars down, involving a lateral movement.

Daylighting - A term to define the procedure of exposing an entire underground mined area to remove all of the mineral underlying the surface.

Day Mine - An underground mine.

Draw Slate - Any soft formation above the coal bed which falls with the coal or soon after the coal is mined.

Drift - A deep mine entry driven into a horizontal or near horizontal mineral seam or vein when it outcrops or is exposed at the ground surface.

Effluent - Any water flowing out of the ground or from an enclosure to the surface flow network.

Evapo-transpiration - A collective term meaning the loss of water to the atmosphere from both evaporation and transpiration by vegetation.

Flume - An open channel or conduit on a prepared grade.

Fracture Traces - "...a natural linear feature consisting of topographic (including straight stream segments), vegetation, or soil tonal alignments, visible primarily on aerial photographs, and expressed continuously for less than one mile." (Lattman, 1958) -interpreted as the surface expression of vertical or nearly vertical joint sets and/or small faults.

Ground hog - The method of mining resembling the burrowing of a ground hog; emphasizing lack of plan and foresight.

Ground Water Table or Level - Upper surface of the underground zone of saturation.

Grout - A fluid mixture of cement; sand (or other additives) and water that can be poured or pumped easily.

Grout Curtain - Is created by inserting materials (usually cement) into rock units through boreholes to decrease their permeability.

Heave - The rising of the floor of a mine caused by its response to weight on the pillars.

Highwall - The exposed vertical or near vertical wall associated with a strip or surface mine.

Impervious - Impenetrable. Does not allow fluid flow.

Infiltration - Water entering the ground water system through the land surface.

MGD - Million gallons a day.

mg/L - Abbreviation for milligrams per liter, which is a weight to volume ratio commonly used in water quality analysis. It expresses the weight in milligrams of a substance occurring in one liter of liquid.

Mulching - The addition of materials (usually organic) to the land surface to curtail erosion or retain soil moisture.

Mushroom mine - A mine developed quickly and shortlived, owing its existence to unusual demand.

Neutralization - The process of adding an acid or alkaline material to waste water to adjust its pH to a neutral position.

Outcrop - The surface exposure of bedrock or strata.

Overburden - Nonsalable material that overlies a mineable mineral.

Oxidation - To combine with oxygen, to convert to an oxide, to increase the valence state.

Permeability - The measure of the capacity for transmitting a fluid through the substance.

pH - The negative logarithm to the base ten of the hydrogen ion activity. pH 7 is considered neutral. Above 7 is basic - below 7 is acidic.

Pillar pulling, robbing, or drawing - The removal of pillars by pick or machine.

Pollution - Environmental degradation from man's activities.

Reclamation - The procedures by which a disturbed area can be reworked to make it productive, useful or aesthetically pleasing.

Regrading - The movement of earth over a surface or depression to change the shape of the land surface.

Runoff - The part of precipitation that flows over the land surface from the area upon which it falls.

Sight - A bearing or angle taken with a compass or transit when making a survey.

Squeeze - The settling of an unbroken roof over a coal bed; also called crush, pinch, or nip; also the upheaval of a mine floor due to unequal pressure on clayey strata.

Stratigraphy - The science of formation, composition, sequence and correlation of stratified rocks.

Swamp - A local depression in a coal bed in which water accumulates.

Subsidence - The surface depression over an underground mine that has been created by subsurface caving.

Surface Mine - A mine facility that is generally conducted from the land surface. It does not have a mineral roof.

Watershed - Surface region or area contributing to the supply of a stream or lake; drainage area, drainage basin, catchment area.

Wet seal - A mine seal with opening under water preventing air from entering the mine; also known as air seal.

Yellow Boy - A compound of iron, oxygen and hydrogen produced by neutralization of AMD with high iron content. Usually found as a yellow to orange solid in AMD receiving streams.