**Mine site terms**

**Abutment Pressures**

When an opening is created in a coal seam, the stress that was present before the opening was created is re-distributed to the adjacent coal pillars that are left. The areas within the remaining coal where the vertical stress is greater than the average are called abutments and hence the stresses in those areas are called abutment pressures.

**Adit**

An access tunnel from the surface to the mine workings that is nearly horizontal. Adits are used to access longwall mines from previously worked highwall mines.

**Air Split**

A division of airflow into two or more separate air ways.

**Air Way**

Underground passageway along which air passes.

**Back**

The roof of any mine opening.

**Ballroom**

A large space left following unusually high fall of roof.

**Barrier Pillar**

A section of coal that is left to substantially separate two working panels. This

technique is often used for mines that are susceptible to spontaneous combustion. If a spontaneous heating occurs in one panel the barrier pillar will prevent the coal in the adjacent panel becoming kindred. They are also used to reduce the amount of subsidence that can occur at the surface. This technique can also be used to prevent accidents such as inrushes of water, gas or explosions.

**Beneficiation**

The treatment of mined material to make it more concentrated and suitable for sale to the customer.

**Black Damp**

This concept is a term generally applied to carbon dioxide rapidly changing and can no longer be regarded as correct. It is also applied to an atmosphere depleted by oxygen, rather than being an excess of carbon dioxide.

**Bord and Pillar**

A system of mining in which a series of roadways are driven at right angles into the coal seam, being square or rectangular pillars, which are to be removed during the second working, after the roadways have reached their limit.

**Caking Coal**

Coal which leaves a coherent (agglomerated) residue when subjected to fact eating.

**Cinder Coal**

(Natural coke, cinder). Coal which has been significantly altered by heat associated

with natural igneous activity; usually local in character.

**Cleat**

Parallel cleavage planes or partings crossing the bedding and along which the coal

breaks more easily than in any other direction.

**Coal Washing**

A beneficiation process to separate the coal from unwanted rock material by utilizing the differences in their specific gravities. The unwanted material is generally heavier than coal and sinks in water whereas coal is lighter and floats in water.

**Coking Coal**

Coal that is used to produce coke. Coke is used in the process to produce steel

products.

**Creep**

Upward movement of a relatively soft floor of a seam under pressure from adjacent

coal. Sometimes used for widespread movement of the upper strata because pillars left for roof support were insufficient size over a relative large area. The lifting or hewing of the floor in a coal mine.

**Development Mining**

Work that is undertaken to expand the mine reserves rather than work that is involved in the extraction of coal. An example of development work is the driving of roadways that will form a new longwall panel.

**Dip**

The angle of a coal seam relative to the horizontal. It is usually expressed as (1 in X) in a certain direction.

**Downcast Shaft**

Shaft or other mine opening which carries fresh air form the surface down to the mine workings.

**Drift**

An inclined access from the surface to the coal seam or from coal seam to coal seam. It often contains a conveyor belt or man riding train.

**Dump**

Discharge point for loaded shuttle cars and other haulage devices.

**Dyke**

An intrusive igneous body which has disrupted the coal seam by cutting through it.

Usually it has a sintered band of coal each side of the rock.

**Egress**

A negotiable underground roadway

**Entry**

An underground passage used for haulage, ventilation, or as a manway.

**Face**

Place where coal is being worked

**Face Cleat**

The principal Cleavage plane that is perpendicular to stratification of the coal seam.

**Factor of Safety**

The ratio of the strength of a coal pillar against the amount of load being applied to it by the overlying strata. The factor of safety is used in determining the acceptable size of coal pillars that are let when entry tunnels are being driven.

**Fall**

Collapse of roof material

**Fender**

A narrow strip of coal left between adjacent workings.

**Firedamp**

Any mixture of methane and air is firedamp. If the methane content in air is between 5% and 14% the mixture will explode and this has been the source of many explosions in coal mines. If above 15% the mixture will burn and hence the name firedamp.

**Flitting**

Moving machinery from place to place

**Flight**

The scraping bars that transport material on chain conveyor.

**Floor Heave**

The process of the floor of a mine beginning to lift as a result of high ground stresses.

**Gas Drainage**

The system used to extract gas from the coal and remove it from the mine. Some mine utilize the gas to operate gas powered turbine to generate electricity.

**Gate Roadway**

A roadway that provides access to a working panel.

**Goaf**

The area abandoned and left to collapse after the extraction of coal.

**Ground Control**

A collective term given to the techniques that are used to prevent the collapse and failure of mine openings.

**Grunching off the solid**

Blasting coal out of the solid face, as opposed to blasting coal which has first been undercut or holed.

**Heading**

A roadway driven into solid coal.

**Haulage**

The transportation of men, materials or ore from one point to another generally in a

near horizontally direction. Vertical transportation is generally called hoisting.

**Hurrying**

The practice of pushing small skip-like vehicles by hand.

**Immediate Roof**

The roof strata that is immediately above the coal seam. This is the strata that requires support for the mine openings to remain competent.

**Inbye**

The direction along a roadway towards the face thus going away from the surface

entry.

**Intake**

Any roadway that is taking fresh air into the workings.

**Lift**

A slice of coal taken from either part of or a whole pillar.

**Longwall**

A system of working coal in which the seam is extracted on a long face.

**Main Entry**

A main access roadway to the working panels

**Methane**

A potentially explosive, lighter than air, gas which comes out of coal seams.

**Methane Monitor**

An instrument that is used to measure the amount of methane present in the mine

atmosphere. It is often mounted on mining machinery or can be used in a hand held

form by shift supervisors to take measurements in non-working areas.

**Natural Ventilation**

Ventilation that is provided without the assistance of fans or furnaces. The occurrence of natural ventilation pressures must be considered when designing a mine ventilation system.

**Open cut**

A mine working open to the surface.

**Outburst**

A violent displacement of fine coal at the face caused by excessive gas and earth

pressure, often associated with areas of weakens in the coal.

**Outbye**

The direction along a roadway away from the working face.

**Overburden**

The layers of material, rock and soil, that overly a coal seam.

**Overcast**

An airway built over the top, and a t angle to, another airway. This is necessary to

separate intake and return airways in certain locations.

**Panel**

A mine is broken up into a number of panels which are working places for each mining crew.

**Pillar**

A block of coal left to hold up the roof and formed by driving a connected series of

headings and cut-throughs.

**Pit-brow**

Mine surface

**Pit ponies**

Horses used to transport coal skips underground.

**Portal**

An entrance to a tunnel.

**Powder Box**

A box used for packaging gunpowder used in coal mines’ the empty box was often sold and used to make furniture.

**Preparation Plant**

The place at the surface of the mine where coal is cleaned and prepared for sale to the customer(s).

**Primary Roof**

The main roof above the secondary roof.

**Prop**

A timber prop roof support set tightly between the roof and the floor.

**Pyrites**

Iron sulphide, a chemical dangerous in mines because of its tendency to ignite spontaneously

**Regulator**

A constructed stopping which controls the air flow in a roadway by means of varying the size of an opening built into the stopping to suit requirements.

**Resin**

A chemical material that is inserted into the top of a drill hole when a roof bolt is being installed. The resin acts a glue to hold the bolt securely in the drill hole.

**Respirable Dust**

Coal dust particles that are 5 microns or less in size.

**Return (Airway)**

Opening along which air returns from the working face(s).

**Return Air**

Air or ventilation that has passed through the workings. In general, it will contain

relatively high concentrations of gas and dust.

**Returns**

Heading used for movement of the air form the face and out of the mine.

**Rib**

The name given to the coal walls of the roadway. These are the sides of the pillars.

**Roof**

The immediate strata above a working place or underground roadway.

**Second Means of Egress**

The alternative roadways from the working area of the mine which can be used in an emergency.

**Shaft**

An opening; usually vertical, connecting the surface with the underground workings.

**Sloughing**

The crumbling and falling away of material from the longwall face.

**Steaming coal**

Coal especially suitable for building up steam in engines

**Stonedust**

Crushed limestone (calcium carbonate) added to coal dust to reduce its potential to

explode.

**Stone Dusting**

Operation of spraying finely ground limestone or other non-combustible and non-siliceous dust on to coal. The limestone particles mix with the coal dust and reduce the possibility of a coal dust explosion.

**Stook**

Small area of coal left at corners of pillar during extraction

**Stopping**

A brick or plaster wall in a cut-through which is used to direct the air flow.

**Subsidence**

The gradual sinking, or sometimes the abrupt collapse, of the rock and soil layers into an underground mine. Structures and surface features above the subsidence zone can be affected.

**Tailgate**

An auxiliary entry gateroad of a longwall panel.

**Trailing Cable**

Heavily insulated electrical cable used to bring power to an electrically operated

machine, such as a shuttle car. The cable trials along the ground from a plug-in power point to the machine.

**Transfer Point**

A point in the transportation system where material is transferred between two

Conveyor systems, i.e. from one belt conveyor to another.

**Upcast Shaft**

Shaft or other mine opening through which air returns to the surface after ventilating the mine workings.

**Ventilation**

The supply of fresh air to all parts of the mine workings and the removal of return air from the mine.

**Web**

The depth of coal that is cut by a shearer drum from the longwall face on each transverse.

**White Damp**

Carbon monoxide gas mixed with air

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