

## REPORT OF THE

in coal mines wherein coal dust is an element of hazard, is a permissible explosive and its use should be extended to the breaking of fallen rock, and this is recommended. It is also recommended that the practice of placing a mud cap, or clay cap, over a charge of explosive give way to the conventional practice of loading the charge in a properly prepared drill hole in all cases where the thickness of the fallen material to be broken makes this practice feasible.

For convenience and to illuminate this report, a small print of the area wherein the explosion occurred is herewith attached.

Respectfully submitted,

ALEXANDER McCANCH,  
*Inspector First Bituminous District.*

C. P. BYRNE,  
*Inspector Twenty-first Bituminous District.*

VERDICT RETURNED MAY 25, 1927, BY CORONER'S JURY IN  
EXPLOSION AT ELLSWORTH NO. 53 MINE, WM. GREEN-  
LEE, CORONER

"We, the Jury, find that Tony Sabatta and five other men came to their deaths following the explosion April 2, 1927, at No. 53 mine of the Ellsworth Collieries Company, located at Cokeburg, Pa., from the effects of afterdamp caused by the explosion. In our opinion the direct cause of the explosion was the firing of an overcharged sand rock shot; prepared and shot by one Clute Douglas in Room No. 11, No. 11 Butt East Entry off "D" Face. The result of this heavy shot was the firing of the coal dust blown into the air by the force of this overcharged shot, causing the explosion.

We wish to commend the prompt action of the officials of this mine which resulted in the saving of five lives.

We find that the deaths of the above-named men were due to accidental sources.

We recommend that careful instructions be given at all times to all shot firers in regard to their duties.<sup>77</sup>

**EHRENFELD NO. 3 MINE EXPLOSION**

On March 30, 1927, at 12:15 p. m., an explosion occurred at the Ehrenfeld No. 3 Mine, operated by the Pennsylvania Coal and Coke Corporation. This mine is situated at Ehrenfeld near South Fork, Cambria County, and is in the Thirteenth District, John Ira Thomas, Inspector.

Four lives were lost, and although the accident is not in the catastrophe class the conditions in respect to this explosion are so marked that it is thought best to give a brief description of the occurrence.

The seam being mined at this operation is the Lower Kittanning and is of a very friable nature with a volatile content not over seventeen per cent. As the initial point of the explosion was on the main intake airway about one mile from the drift mouth, and at least one and one-half miles distant from active workings, it proved conclusively the explosibility of coal dust of a low volatile content without the addition of methane.

The report of the Commission and the verdict of the Coroner's Jury of Cambria County follow:

## REPORT OF COMMISSION OF INSPECTORS

Mr. Frank Hall,

Johnstown, Pa., April 1, 1927.

Deputy Secretary,  
Department of Mines,  
Harrisburg, Pennsylvania.

Sir: The undersigned Commission of Bituminous Inspectors, who have investigated matters relating to the explosion in Ehrenfeld Mine No. 3, operated by the Pennsylvania Coal and Coke Corporation, which occurred March 30, 1927, at 12:15 P. M., beg to report as follows:

This mine is a drift operation situated in the town of Ehrenfeld, Cambria County, approximately eleven miles east of Johnstown. It is working the Lower Kittanning seam which averages 42 inches in thickness, and was opened in 1880. The normal force employed underground averaged 350 men, who produced 2,000 tons daily.

The mine is classified as a gaseous mine and is worked exclusively with approved flame and electric safety lamps. The coal-cutting machines are of a closed type approved by the United States Bureau of Mines. All other electrical machinery was in use only on the intake airways. The ventilation is maintained by three ventilating fans of modern type, operating from three separate shafts of 400 feet in depth, and producing 155,000 cubic feet of air per minute at an average gauge of 2¼ inches. Adequate supervision is supplied in the way of Assistant Mine Foremen, Fire Bosses and Shot-firers. The workings of the mine cover a large area, approximately 10 square miles, and are divided into three separate and distinct sections which utilize a common main haulage road.

The explosion caused the death of four men. The remaining employees, numbering 290, proceeded from the mine uninjured by means of exits adjacent to the several sections. The explosion blast occurred at 12:15 P. M., and at 12:22 P. M., all electrical power connections to the mine were disconnected. Supplies and help from surrounding territory speedily arrived and the rescue and recovery work progressed rapidly with the result that all bodies were removed from the mine and the balance of the employees led to safety within five hours after the blast.

The Commission began its investigation March 31st and found the explosion area was confined to the lower section of No. 13 Plane and on the main haulage road in the locality of its junction with No. 13 Plane and from this point outbye to the drift mouth.

No. 13 Plane is a raise entry turned to the left off the main entry at a point 6,000 feet from the drift mouth. This plane is 4,500 feet long and ascends at an average grade of 8 per cent. It is the avenue by means of which the coal mined in the Plane section is transported to the main haulage road. The plane is double-tracked for a distance of 3,500 feet from the top, and approach to the main entry is by a single track 1,000 feet long. At the top of the plane is a well constructed hoist for use as a means of raising and lowering the employees of the Plane section, and also a figure eight gravity sheave with motor attachment for controlling the coal trips. Forty loaded cars are dropped in trips which raise forty empty cars from the bottom. At the junction of No. 13 Plane and the main entry is located the dispatcher's office from which bell signals and telephone communications are maintained with the top of the plane. As the loaded trips are

landed at the plane bottom they are attached to a motor waiting to receive them and hauled to the surface. All motor trips of other sections, either ingoing or outgoing, stop at the dispatcher's office for orders. The power for use on the Plane section is transported by means of an electric insulated cable suspended from hangers located near the right hand side of the plane entry inbye. Immediately preceding the explosion a trip of 70 loads from the "F" main section was halted beyond the junction in order to allow a Plane trip in transit to land. A motor trip of 50 empties bound for the Dip section had stopped in front of the dispatcher's office for the purpose of securing sand and transportation orders. A third motor, unattached, was waiting on loaded track in front of dispatcher's office to receive the plane trip. The operator at the top of the plane had received the three bells of the landing signal and immediately thereafter was aware the trip had broken. About two minutes later the blast occurred, which killed the three motormen mentioned and the dispatcher. The force of the explosion proceeded outbye to the drift mouth where windows in adjoining buildings were shattered and some little damage done to a few small frame structures. The report of the explosion was heard for a long distance. A call for help was immediately sent out and was responded to quickly. The first rescue crew entered the mine two hours after the explosion and shortly reached the bottom of the plane where the four bodies mentioned above were found. Observation here showed that the bottom of 13 Plane was blocked with a wrecked trip of loaded cars. The rescue operations were continued to all sections of the mine, but no further evidence of the explosion was found. The men found in other sections were taken from the mine by different exits than the main entry.

From the evidence of heat and force effects observed, the Commission is of the opinion that the initial point of the explosion was near the bottom of the No. 13 Plane, and the disaster was caused by the spreading of the coupling link between the fourth and fifth rear cars on the loaded plane trip, allowing 36 cars to proceed from a point one-half way down the plane, to within 300 feet of the bottom where the cars derailed, knocking out timbers and causing roof falls, with the result that the electric cable was torn from its moorings, and an uninsulated section came in contact with the wheel of a wrecked mine car, causing an electric arc of sufficient intensity to ignite the coal dust that was thrown into suspension by the wreckage of the trip.

Therefore, to provide for the health and safety of persons employed in this mine and for the protection and preservation of the property connected therewith, we recommend that electric carrying cables or feed wires, other than trolley wires, be so located in connection with the haulage roads that no contact can be made between them and derailed cars or motors.

All of which is respectfully submitted.

THOMAS D. WILLIAMS,  
*Inspector Sixth Bituminous District.*  
JOHN IRA THOMAS,  
*Inspector Thirteenth Bituminous District.*  
THOS. A. MATHER,  
*Inspector Eighteenth Bituminous District.*  
NICHOLAS EVANS,  
*Inspector Twenty-fourth Bituminous District.*

VERDICT RETURNED APRIL 5, 1927, BY CORONER'S JURY  
IN MINE EXPLOSION AT EIREFELD NO. 3 MINE, ANNIE  
F. SWABB, CORONER.

"Injuries received as result of explosion at bottom of No. 13 Plane at its junction with main heading in Mine No. 3 of Pennsylvania Coal & Coke Corporation following wreck of runaway trip of 36 cars of coal, which explosion resulted from spark caused by a wrecked car wheel coming in contact with an electric power feed line, igniting the coal dust in suspension following wreck. Wreck was caused by breaking coupling link on 4th car from the rear end of trip being lowered down No. 13 Plane. We find no evidence of negligence and concur with the report and recommendation of Commission of Mine Inspectors."

#### KINLOCH MINE EXPLOSION

On February 20, 1928, at 9:30 P. M., an explosion of gas and coal dust occurred in the Kinloch Mine operated by the Valley Camp Coal Company, located near the town of Parnassus, Westmoreland County. Twelve lives were lost. Two of the victims were employed in the Boyd Mine of the W. H. Boyd Coal Company, which was connected with the Kinloch Mine, and were overcome by afterdamp when they entered their working places the next morning.

The Kinloch Mine is in the Fourteenth District, W. J. McGregor, Inspector. The report of the Commission and the verdict of the Coroner's Jury of Westmoreland County follow:

#### REPORT OF COMMISSION OF INSPECTORS

February 28, 1928.

Hon. Walter H. Glasgow,  
Secretary of Mines,  
Harrisburg, Pa.

Sir:

The undersigned Commission of Bituminous Inspectors appointed to investigate the cause of the explosion that occurred in the Kinloch Mine of the Valley Camp Coal Company, on the night of February 20, 1928, at 9:30 p. m., by which twelve workmen lost their lives, did on February 27, 28, 29 and March 1, 1928, thoroughly examine that part of the Kinloch Mine affected by the explosion, and also the Boyd Mine of the W. H. Boyd Coal Company, a small operation producing coal for a brickyard, where two of the victims lost their lives the following morning by afterdamp which penetrated the Boyd Mine through a connection into the Valley Camp Mine which is now a part of the Kinloch Mine.

Prior to the explosion the Valley Camp Mine was ventilated as a separate mine by a fan exhausting at a shaft opening. This connection was known to the management of both operations, but the W. H. Boyd Company did not learn of the explosion in the Kinloch Mine until two of their employes had lost their lives and the narrow escape of three others. Prior to the explosion the Boyd mine opening was an inlet to the Valley Camp fan.

The Kinloch Mine is a slope and shaft operation and is situated near the town of Parnassus, Westmoreland County. It is working the Freeport seam which averages 72 inches in thickness, and was