

**VERDICT RETURNED APRIL 5, 1927, BY CORONER'S JURY  
IN MINE EXPLOSION AT EHRENFELD 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 employees 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

opened in 1916. The coal is dumped at the bottom of the slope, which is four hundred feet long having a pitch of 30 degrees, and is conveyed to the surface by means of a conveyor.

The normal force employed underground averaged 325 men, who produced from 1,500 to 1,800 tons daily.

The mine is opened with four main entries leading from the bottom of shaft and slope. The main body of the mine lies to the right of the mains and is developed on the two entry system. The face and butt entries are driven in pairs.

The mine is a gaseous mine and is worked exclusively with approved electric cap lamps and a few safety lamps. The ventilation is maintained by two ventilating fans of modern type, operated as separate units from two separate shafts, and producing a total of 240,000 cubic feet of air per minute. The operating part of the mine was ventilated by the fan at the Kinloch shaft opening, producing 160,000 cubic feet of air per minute, running at 170 revolutions per minute with water gauge of 1.9 inches. The fan at the Kinloch shaft opening is used as a force fan and the haulage roads were therefore on the return. It was found necessary after the explosion to erect stoppings and double doors at the bottom of slope, forcing the air current through to the Valley Camp openings so that exploring parties would be on the intake as they advanced.

Electric power is used exclusively at this mine. Locomotives of the trolley type winch reel gather the coal. The coal-cutting machines are self-propelled, receiving their power from the trolley wire, and from our observation were not receiving proper care and attention.

On the afternoon of February 20, 1928, a night shift of twenty-two persons entered the Kinloch Mine, including a night foreman, four machine men, four supply men, twelve pumpers and repairmen, and one man attending an M. G. set, (six machine men did not report for work on this shift). When the explosion occurred they were scattered over a large area of the mine. Twelve of the workmen happened to be outside the range of the forces and afterdamp and escaped.

The following morning about 5 A. M. two miners, not knowing that an explosion had occurred in the Kinloch Mine, entered the Boyd Mine and were overcome by afterdamp when they were within a short distance from their working places, which is near an opening into the Valley Camp Mine. Another miner entered the mine at 6:10 A. M. and got beyond the side track which is 1,700 feet from the main entrance. He felt the effects of the afterdamp and decided to return; when he got back several hundred feet he became unconscious when within thirty feet of fresh air. He was picked up by two miners who had entered the mine at 6:30 A. M. in a car drawn by a mule. They had reached the side track and walked a short distance beyond when they decided to go back as they were feeling the effects of the afterdamp; about 700 feet from the side track outby they discovered the third miner and picked him up and placed him on the car and started for the outside. When they got outside the unconscious man revived, the mule collapsed but survived the trip.

We found accumulations of explosive gas in Nos. 16, 17 and 18 right butts, and gas generating at the face of 20 butt, off 11 face; and

in 11 and 12 faces right and left off 23 and 24 right butts off 7 face, and also in those butts; and on 21 gob fall off 21 right butt off 7 face, as shown on mine map which is part of this report.

There is no evidence on the fire boss' record book to show that an examination had been made for the night shift on February 20, 1928, and for some time prior thereto. The nightshift fire boss was taken off in November, 1927. From an examination of the fire boss' record book and our observation in the mine, we believe that all gas findings were not reported.

The two sets of machine men were the only workmen at the faces on the night of the explosion. The bodies of two of the machine men were found 550 feet from the place they were undercutting, indicating from evidence found that they had traveled this distance after the explosion. The reflector of a cap lamp was found near the mining machine which was located at the face of 12 butt stumps off 11 face.

The bodies of the other machine men were found on 17 right butt off 11 face. The mining machine was found at 16 room. The second body was found 12 feet inby this room. These bodies were badly burnt. The controller lever was in the "on" position and the reverse lever set for advancing inby, indicating that the machine was moving towards the face of 17 butt which is 260 feet from where the machine was found. The face of 18 butt is about 100 feet from the last cut-through. We found a clay vein at the face and explosive gas generating freely. The air current travels from 18 butt to 17 butt.

The bodies of two supply men were found on 20 right butt off 7 face near a trolley locomotive with a truck load of T-iron rails at No. 10 room.

The body of a pumper was found on 6 face at 13 butt.

The bodies of two supply men and the body of the night foreman were found, one on the main haulage and two in entrance to 6 face, a short distance apart. A trolley locomotive with a sand car was standing inby on 6 face. The position of the bodies indicated that they had been at the locomotive and were making an effort to escape.

A careful study of the direction of forces as indicated on the mine map shows that the explosion originated in 17 right butt off 11 face and was propagated by coal dust and may have been reinforced by other accumulations of gas. The flame of the explosion extended into rooms, entries, and worked-out areas, covering a section of the mine about one mile wide and a little more than a mile long. The greatest distance the flame traveled as measured by the shortest route along the entries is about 7,500 feet to a point on the main haulage between Nos. 4 and 5 faces.

A remarkable case of coking was found on 7 face between Nos. 18 and 20 butts. The forces traveled out of 15 and 20 butts and spread in both directions on 7 face and met where the coked area was found. The coking showed prolonged and intense heat.

Near the face of 17 butt off 11 face, an empty powder box was found. The box evidently contained some permissible powder which had burned quietly as the box showed strong evidence of fire and part of cartridge remained in the box.

The conclusions of the undersigned are the explosion originated at the coal-cutting machine in 17 butt off 11 face. The source of ignition

was an electric arc which formed when the machine men were trolleying the machine up 17 butt by means of a hook terminal sliding along the trolley wire and when they reached 16 room ignited a body of gas.

This accumulation of gas may have been brought about by a stoppage of the ventilation, a damaged door, or a door being left open, as there were thirteen single doors controlling the air current on this split.

To provide for the health and safety of persons employed in the Kinloch Mine of the Valley Camp Coal Company, we recommend the following:

1. That a shaft of ample dimensions be sunk at a suitable location in the body of the mine, and provided with a separate inlet and outlet and a stairway placed in the inlet side, and a fan of ample capacity installed at the outlet exhausting, to properly ventilate the mine and provide an escapeway.

2. That the advance workings off 9 face and all the workings off 11 face be stopped until the shaft is down and the workings properly ventilated by the lock door system.

3. That more overcasts be used and as few doors as possible be used in conducting the air current throughout the mine.

4. That where face entries are in pairs a parallel entry be driven on each side to provide a return airway and a place for the gobs to drain into, and where it is necessary to have a haulage road between faces where the room coal has been mined out that said haulage roads be separated from the gobs by stoppings of incombustible material.

5. That the mine be thoroughly rock-dusted to within a short distance of the working places and re-dusted at such intervals of time that the percentage of non-combustible matter in the mine dust will be greater than 65 per cent.

6. That all electric power lines be removed from the slope and for some distance back from the bottom of slope, and means be provided to take care of the coal dust produced by the dumping of the coal at bottom of slope and conveying said coal up the slope to prevent the dust being taken back into the mine.

7. That electric haulage by locomotives operated from a trolley wire be operated only on intake air, fresh from the outside.

8. That electric equipment used in the mine be of the permissible type and installed and maintained as required by law.

9. That an examination be made by a fire boss and a report made of said examination in the fire boss' record book before each shift enters the mine. That before places are undercut or before firing a shot a test be made for gas by a competent person.

Respectfully submitted,

JAMES D. WALKER,

*Inspector Third Bituminous District.*

W. J. MCGREGOR,

*Inspector Fourteenth Bituminous District.*

JOHN F. BELL,

*Inspector Twenty-second Bituminous District.*

THOS. H. THOMPSON,

*Inspector Twenty-eighth Bituminous District.*



**VERDICT RETURNED MARCH 15, 1928, BY CORONER'S JURY  
IN EXPLOSION AT KINLOCH MINE, JAMES M. HARKINS,  
CORONER**

"We find that the following persons came to their death in the Kinloch Mine of the Valley Camp Coal Company, situated in Lower Burrell Township, Westmoreland County, Pennsylvania, February 20, 1928, namely: William Ivory, West Blackman, John Pool, Charles Wise, and Andrew Stroder, from an explosion of gas, and that the following persons, Thomas Burtoff, William Casey, Kinzy Nice, John Clark, and Parley Bell, from afterdamp.

We find that the explosion was caused by the failure of the proper mine officials to operate the mine as required by the Bituminous Mine Laws of the State of Pennsylvania.

We find also that Louis Venzel and G. Newton Beck came to their death in the H. W. Boyd Mine, Lower Burrell Township, Westmoreland County, Pennsylvania, February 21, 1928, from the effects of afterdamp caused by the explosion of gas in the Kinloch Mine adjoining and from the failure of the officials of the Kinloch Mine to notify the H. W. Boyd Coal Company of the explosion."

**MATHER MINE EXPLOSION**

On May 19, 1928, at 4:07 P. M., an explosion of gas and coal dust resulting in the loss of 194 lives occurred at the Mather Colliery, operated by the Pickands, Mather and Company, situated at Mather, Greene County, and located in the Twenty-first District, C. P. Byrne, Inspector.

The appalling magnitude of the disaster caused consternation to spread throughout the entire mining industry, for this operation was recognized as being under careful and intelligent management, and was conducted along modern lines with respect to safety practices.

On being notified of the intensity of the explosion, the Department of Mines directed all available inspectors, 22 in number, to report at Mather without delay.

A mine rescue car with a full corps of officials of the Federal Bureau of Mines, and trained rescue workers from all the bituminous mining sections of the State, responded quickly to the call for assistance. The rescue and recovery operations were so efficiently organized and carried on that all the uncovered bodies were removed from the mine by the morning of May 23, and the mine turned over to the owners for the purpose of restoring ventilation.

The Secretary of Mines appointed a Commission of seven Mine Inspectors and invited three officials of the Federal Bureau of Mines to accompany them in an investigation to determine the cause of the explosion.

The investigation began on May 28 and was concluded on May 31. The report of the Commission and the verdict of the Coroner's Jury of Greene County follow: