

CONFIDENTIAL

REPORT ON MINE EXPLOSION #7 MINE OF THE WEST KENTUCKY COAL COMPANY, CLAY, KY..


A mine explosion occurred at the #7 Mine of the West Kentucky Coal Company, August 3, 1927, at approximately 3:45 p.m. The explosion originated at the face of #10 left entry off the West Dips at a distance of about 5,000 feet inby the shaft bottom.

From an explosion standpoint, the explosion was purely local, effecting #7, 8, 9, and 10 left entries off the Dip and 7 right entry of the Dip. The force of the explosion was barely felt at the shaft bottom as a slight puff of air. No back lash was felt at the bottom or in as far as #5 left entry off the West Dips.

The haulage on the West Dips had been rock-dusted into #10 left entry but the parallel entry, used as an air course, had not been rock-dusted. Barriers had been built on this entry just out by #7 right entry but no rock dust or barriers were located in by #7 right entry. No. 7 right entry itself had been rock-dusted into a point about 240 ft. inby the trap door. No. 10 left entry had not been rock-dusted.

In order that the locations of the entries mentioned may be understood, it is well to note that the entries were turned off to the right and left of the Dip entry on 350 ft. Centers, and that No. 7 right entry was located opposite and about 100 ft. inby #9 left entry.

The explosion was caused by an accumulation of gas in the middle entry of #10 left entry. A miner had shot two bottom holes at about 3:15 p.m. and had started out of the mine. One of these shots went into a pocket of gas and liberated a large quantity of gas in this heading. An open type mining machine was making a cut in #10 left entry which is to the left of the entry in which the shots were fired and on the return side. A miner was loading coal in the air course to the right of the entry in which the gas was generated. From our investigation, we were satisfied that the gas from the middle entry did not mix with the ventilating current to any extent but was sucked around the pillar at the Breakthrough into the entry where the machine men were cutting. It would appear from the evidence at left that the explosive gas gathered over the machine and was set off by the machine. It appeared from the coking on the timbers that the explosion was very slow in starting, thick coat being found on the timbers near the top of the middle entry. The location of the blown out stoppings on #10 left entries seem to indicate that the force of the explosion gathered and expanded from the middle entry. The two machine men found dead behind their machines were quite badly burned but the miner in the right hand entry of this set of entries appeared to have had time to start running down the entry and was found about 120 ft. from the face of his entry. His coat was found inby the last breakthrough and no evidence of flame had reached it.



The explosion came down #10 left entries, blew out a stopping between the rock-dusted haulage way, and the air course, and advanced outward to #7 right entry. The flame swept in #7 right entry to about 50 ft. outby the last entry breakthroughs. The flame did not reach beyond the last breakthrough in any of the five rooms which were turned off this entry. In an earlier paragraph I called your attention to the fact that this entry had been rock-dusted into a point about 240 ft. inby the trap door. It is of interest to note that there was no evidence of coking or flame in the rock-dusted area but that considerable coking and flame were shown inby this point. This observation satisfied me that the flame came up the air course and through the 7 right air course into this set of entries, but did not penetrate the rock-dusted area. Evidence of flame was shown in one room in #9 left entry, and the loaded track of which had been rock-dusted. It is well to note, however, that this flame came in through #9 left air course across the entry track and through a breakthrough into #5 but stopped about 30 ft. inby the first breakthrough. No evidence of flame was shown in #4 room or inby #8 room on the entry itself. A fall of roof occurred in the rock-dusted haulage entry beginning at a point just inby #9 left entry and extending to within 15 ft. of the face of the entry. It was therefore, impossible to observe whether flames swept up the haulage Dip entry to #9 left entry, or whether the flame we found in #9 left entry had come up through the un-rockdusted air course. No evidence of flame was found on either entry of the Dips outby #9 left entry.

The force of the explosion was evidenced by the blown out stoppings to a point just outby #8 left entry and two stoppings blown out on #7 left entry, stoppings which were blown out on #7 left entry were caused by only a slight force. Stoppings were also blown out on #6 left entry, but no great force could have been evidenced due to the fact that two mules were found alive in this set of entries. Just outby #9 left entry on the haulage Dip entry, enough force had been generated to take a 10 $\frac{1}{2}$ ft. mine car and turn it completely around in the entry, and badly damage the back end of it. Yet cars in #9 left entry and on the haulage entry out by the damaged car were unharmed.

As stated above the men in #10 left entry were found dead. Two men had been working in the straight Dip entries loading coal. Both of these men were found in the air course, one on each side of the mine car; although we are satisfied from the evidence that one man had been loading coal in the haulage entry when the explosion occurred due to the fact that his shovel was found in a loading position. These men were not burned and had no evidence on them of having been killed by force. The pumper was found at the next to the last breakthrough on the air course and there is no question but that he was killed by the force of the explosion.

Nobody was found in #9 left entry, due to the fact that this entry had been stopped about a week before the explosion. Six men were found dead in #7 right entry. These men consisted of four loaders, a motorman and his snapper. Am satisfied that four of these men were killed by the flame of the explosion. The motorman had his motor in #5 room and beyond the flame area. His snapper appears to have been at the parting just throwing a switch when the explosion occurred. It would appear that the motorman got off his

motor and went down into the flame area after the explosion occurred and was probably killed by afterdamp. The evidence also would leave one to believe that one of the loaders was at the face of the air course loading coal at the time of the explosion, or at the last breakthrough. Would seem that he tried to escape and that his clothes caught fire from some source before he became unconscious he had time to remove at least half of his clothing. This clothing was found in a heap close to the body.

A body was found on the Dip haulage just inby #6 right entry. No evidence of flame or force was shown on this body. He was doubtlessly killed by afterdamp. Had he have been able to advance 200 ft. more he would have been able to get on to the intake air and would have been saved. No bodies were found on #6 right entry, but the two mines were alive and let out unharmed.

There were a number of men working on #6 left entry and all but two escaped by retreating through the line room into #7, through #6 and out #6 left entry. Two men in #6 left entry were found at the top of the heading behind an improvised barrier. These two men had climbed over a fall in the entry and had torn their clothes off of themselves and had tried to build a barrier out of their clothes. They had even stooed their shoes on end in order that they might cover more area. I am satisfied though that these men must have been out of their minds while doing this, due to the fact that there was plenty of material to build a barrier with from the rock which had fallen on the entry. These men were killed by afterdamp. This accounts for all 16 men who were killed by the explosion.

It is difficult to know how many men were in the mine at the time of the explosion, but the average estimate indicated that there were about 46 men in this section of the mine, a number of whom were outby or beyond the force of the explosion. All the investigators are satisfied that three men's lives would have been saved had each man been equipped with self-rescuer, and Mr. Christian and myself are of the opinion that six lives would probably have been saved had the men been wearing self-rescuers.

It is well for us to note that the practice of caching self-rescuers in the mines would have been ineffective in saving any lives at this explosion because no man had traveled more than 500 ft. before he was killed. In order to have been effective the Self-Rescuer would have had to have been where the men could have put his hand on to it in less than half a minute.

Seventeen minutes after the explosion occurred, the Bureau of Mines Car #4 was at the scene of the explosion. The first advanced were made with Gibbs apparatus, but all of the work was done while the advancing men were wearing All-service Gas Masks. No other apparatus except these two types were used. Thirty hours and thirty minutes after the explosion occurred, all of the bodies had been removed from the mine. They were then ready to reventilate the mine. On Monday morning after the explosion occurred, the mine was ready for operation.

This explosion might have been prevented had the machine runners been carrying flame safety lamps, and it is certain that the number of lives would have been reduced to three, had the mine been entirely rock-dusted to within 50 ft. of the face of all entries.

I beg to inform you that this company has purchased ten heavy duty flame safety lamps, and from now on will require each man running a machine to carry a lamp with him and examine for gas before starting to cut any place and if necessary to examine while the place is being cut. Instructions have been given to all Superintendents in the closed light mines of the WestKentucky Coal Company that all advancing workings must be kept rock-dusted up to the last breakthrough.

No decision has been made by the company as to the procedure they are going to follow regarding Self-Rescuers. However, I am in a position to state that Mr. Thomas Christian their General Superintendent and a number of their superintendents and mine foreman are in favor of each man carrying a self-rescuer, and I believe that before long enough pressure will be brought to bear upon the General Management to require the adoption of the self-rescuer in their gaseous mines.

It is understood that such information as is given here shall be treated as confidential.

(signed) C. W. Nelson,
Representative.