

instead of wood, and whether or not that is feasible or practical is a question that must be left to the general managers and general superintendents.

Under the mine law, all places should be made safe for men to work in. Is a gangway half a mile or a mile in length, closely double timbered and lagged, and dry as punk, safe for men to work in? How can they escape in case of a fire, say half a mile from the face, if the fire is not discovered at the start? Under such circumstances they would be as bad off as the men in the China Vein of the Pancoast mine.

To replace timber with steel, iron or concrete in many of the gangways opened in the Mammoth vein in many of the counties would add an additional dollar a ton to the cost of production. Can the coal companies bear this expense at the present price of coal? While this danger exists and has existed for fifty years very few lives have been lost by fire in gangways, airways and chutes. But a disastrous accident of this kind may occur any day, and the purpose of this article is to call attention to this matter so that preventive measures may be taken.

The Avondale disaster and the Pancoast disaster are not parallel cases. A disaster such as Avondale can never occur again, as every shaft and every slope now has a second opening. Yet there is some danger from fire in breakers that were built over or near the shafts before the law was enacted, or were rebuilt since its enactment under a favorable ruling of the court on the subject.

An accident of this kind occurred at the shaft of the Pennsylvania Coal Company, where the breaker was destroyed. Luckily the shaft had second openings available through the outcrop openings by which all the employes escaped.

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#### MINE FIRE AT THE PANCOAST MINE

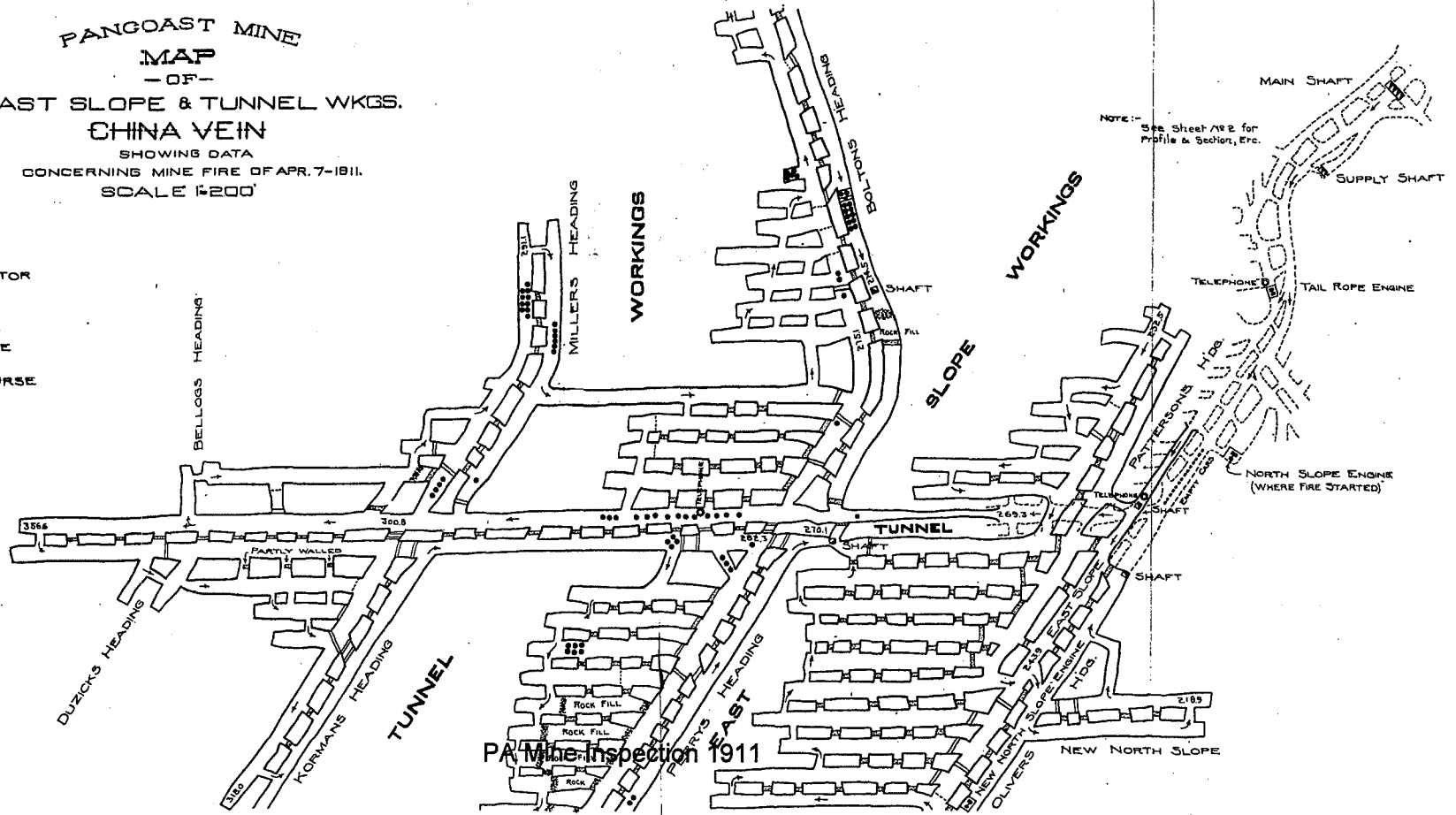
A very disastrous fire occurred in the engine house in the China vein of the Pancoast mine of the Price-Pancoast Coal Company, April 7, 1911. Disasters of this kind are very rare, but they may be very destructive both to life and property, as was the case in this instance. Not since the Avondale mine fire in September, 1869, has there been any similar disaster of equal magnitude.

This engine house (if it can be properly designated as such) consisted of an open space excavated in the coal about 30 feet long and 10 feet wide, with twelve sets of ten-inch round timber, the collars between notches being 10 feet and the height being 8 feet. The engine was placed on the floor resting on two square stringers and fastened to the bottom rock. The platform on which the engine rested was 5 x 8 feet and made of two-inch plank. From the engine house a small opening about 6 x 6 feet was made through the coal to the passing branch that leads to the tunnel. The engine had been in use for about six years and had never at any time caused any apprehension on the part of the inspector, superintendent, mine foreman, fire boss or any of the employes as to the possibility of danger from fire, and, in my opinion, judging from personal observation, no one would have

PANGOAST MINE  
 MAP  
 -OF-  
 EAST SLOPE & TUNNEL WKGS.  
 CHINA VEIN  
 SHOWING DATA  
 CONCERNING MINE FIRE OF APR. 7-1911.  
 SCALE 1:200'

LEGEND:-

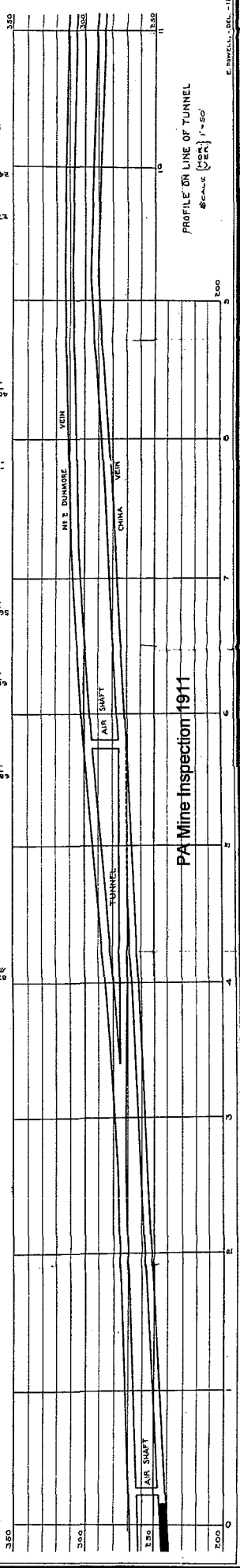
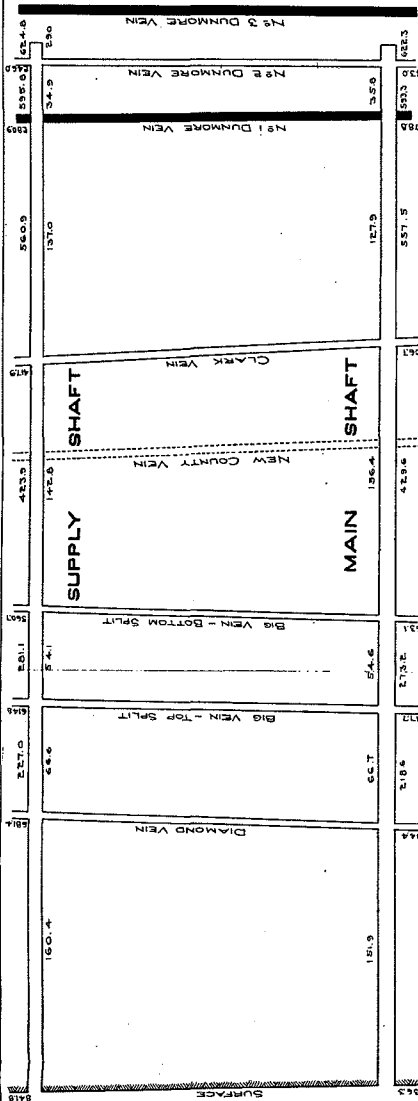
- REGULATOR
- DOOR
- WALL
- CANVAS
- BRATTICE
- BODY
- AIR COURSE



PA Mine Inspection 1911

TO ACCOMPANY  
 PANGCOAST MINE MAP  
 SHEET NO. 1

SECTION - MAIN & SUPPLY SHAFTS  
 SCALE 1"=50'



ENGINEER, 1911

deemed it possible that a fire could occur in the engine house that would be of such serious consequences. The unexpected happened in this instance.

As can be seen from the tracing herewith submitted, the engine house was placed about 50 feet off the double track branch leading into the tunnel that cuts the China vein and on this branch twelve empty cars were standing. The veins at this point form a small basin and the tunnel is driven through the top rock of the China vein, penetrating the vein at a distance of 300 feet. The engine was placed at this point to hoist the coal.

After the fire was ignited in the engine house the heat and smoke therefrom were carried by the air current to the double track branch directly opposite, setting the cars on fire and thence to the tunnel and through it to the workings of the China vein on the other dip and into the workings, as can be seen on the map, to the men at their working places in the several gangways.

It is my opinion, as stated at the inquest, that it was impossible for any of the men to escape, except those in Perry's and Bolton's gangways. As corroborative of this opinion, it may be stated that Mr. Perry, who drove the gangway and knew the connections better than any other man, lost his life while endeavoring to guide the people from his gangway to a place of safety. However, sixteen persons escaped from Perry's and Bolton's gangways under the guidance of drivers and runners.

A few of the jurors at the inquest criticised the method of fighting this fire, but they did so without cause. It is very easy to criticise, but if the critics had been there it is hardly probable that they could have used any better method than that employed by Superintendent Birtley. The fire was extinguished, unfortunately too late to save the lives of other persons in the mine; but these persons could not have been rescued in any way after the fire was discovered. Even if the fan had been stopped, as suggested by a juror, the heat from the fire would have created a sufficient volume of air to carry the poisonous smoke from the burnt wood and coal to the men.

Ordinarily about 25,000 cubic feet of air per minute entered the tunnel, and it can be assumed that the heat from the fire increased that amount, so that 50,000 cubic feet of poisoned air per minute passed into the tunnel. Assuming the area of the tunnel to be 60 feet, the velocity of the air would have been about 800 lineal feet per minute, which means that the air traveled at the rate of a mile in about  $6\frac{1}{2}$  minutes. That being the case, how could any of the persons (except those in Perry's or Bolton's gangways who were notified of the fire by telephone) have escaped, or how could any person from outside have given them any assistance? Even Harvey, the man that received the telephone message, lost his life while endeavoring to notify his co-employees of their danger. Men could not breathe the poisonous-laden smoke from the burning coal and wood and live more than a very few minutes.

A great deal was said about there being no second openings from this tunnel; that the opening was merely a blind tunnel. Upon seeing this statement in the newspapers, I made a personal investigation of this particular place and found two second openings or avenues that the men could have escaped through if they had had a chance. However, while these second openings were probably not up to the re-

quirements of the law as being always safe and available, no loss of life can be attributed to their condition. Even if the victims had been instructed how to escape, in case of accident by a gas explosion or a mine fire, none of them could have reached the second openings through the poisoned atmosphere, except those from Perry's or Bolton's gangways. Under existing conditions, when the engine house took fire the fate of a majority of the men in the China vein was sealed.

The second opening through the East slope was available to the employes in Perry's and Bolton's gangways and was a safe outlet to those who made their escape without delay. It was not, however, available as a safe outlet to the other employes, because they were unable to reach it through the poisoned atmosphere. The openings to the vein above would have been available as a safe outlet from a cave-in or possibly a slight explosion of gas, but in this instance they were useless, as they could not be reached in time.

The accident at the Pancoast mine has been the means of calling the attention of the Legislature to the danger of fires in coal mines and will and has brought about the enactment of measures that will, no doubt, do much to prevent the recurrence of such accidents.

A synopsis of the testimony of the witnesses at the inquest, which continued for a period of eight days, is given herewith, together with the report of the inspector of the district, the report of the coroner's jury and the verdict of the jury.

#### TESTIMONY OF WITNESSES AT INQUEST

David Birtley, superintendent of the Pancoast colliery, testified in part as follows: "On the morning of April 7, 1911, I was sitting in the mine office, at about 25 minutes to 9, when the headman came in and said, 'Mr. Birtley, you are wanted inside in the Dunmore vein.' I said, 'All right.' I jumped up, the cage was waiting, and I got on the cage and went down. When I reached the foot of the shaft the footman said, 'Mr. Birtley, the North slope engine house is on fire.' I rushed in of course. When I reached the engine house I met Leo Winters, I think, and said, 'Leo, have the men been notified to come out?' He said, 'Yes, John Evans has gone to the West slope and notified the men, and Walter Knight and the fire boss have gone into the tunnel.' With these facts before me I pitched for the fire. They had one stream of water on the fire at that time, and we got another stream on it from another plug and shortly the fire began to diminish in the engine house. In the course of about half an hour, or it may be a little longer, we got the fire under control.

I was then at the engine, and Henry Simpson and, I think, William Baker were putting out the fire in the little alley that leads from the engine house to the gangway where the cars were standing on the passing branch. I went out of this passageway towards the road that leads to the North slope. There I met the driver boss and said, 'Leo, we have got the fire under control again. We have got it about out.' He said, 'Come here.' I went around the corner. He said, 'All those mine cars are on fire.' 'Oh,' I said, 'I didn't know that,' and he didn't know it before; and there was a stream of fire I don't know how long. There were 14 or 15 mine cars standing there, some of them were burning and some were not. I said, 'The best thing we

can do now is to get the hose from the surface, the Hose Company's hose, so as to get another stream on the fire.' So I went out and got the hose and I said to Mr. Jones, 'You better phone down for the rescue car and notify the Mine Inspector.' \* \* \* I returned to the mine and about half past two the fire in the gangway was under control.

The engine house had been there eight years. We had a fire plug at the engine house, with 1½ inch hose attached, with water always on. The hose was tested every morning by the engineer. We had two other water plugs and hose convenient. We had 30 or 40 men fighting the fire. We had all the men that could work at the fire, and all the men needed for standing props.

We got the water to fight the fire from a three-inch pipe connected with the tank on the surface to the foot of shaft. There it was reduced to a two inch pipe and conducted along all the gangways and a branch opposite every or nearly every chamber. We had about 1,600 feet of one and one-half inch hose in several gangways; at about every 500 feet we had a roll of hose always ready for an emergency. We could have used four hose on this fire, but on account of the limited space two hose were all that could be used to advantage. We had great pressure, about 800 feet, the depth of the shaft. No person could go in past the trap-door on Perry's heading to notify the men to come out on account of the dense smoke which would be fatal to breathe in a few minutes. Henry Simpson and George Simons were the two men that discovered the fire first."

James J. Moran, engineer at North slope, testified in part as follows: "I am the engineer for both the China and Dunmore veins. The morning of the fire, the rope rider, James Caswell, and I came in together to the engine house. I opened the cupboard and gave Caswell a lamp full of oil and lit the lamp in the engine house. I just ran down one trip that morning and pulled it back up. I then looked around and saw everything was all right and I turned down the lamp and started for the other slope engine. In about half an hour or so I started to smell smoke, and in about five minutes more I started back to the north engine house and found it full of smoke and on fire. But before I reached the engine house Frank Shantis told me the engine house was on fire. I couldn't get into the engine house on account of the heat and smoke. I saw Micheson, the engineer, at the tail rope where the telephone is. He said that he had telephoned to the men in the tunnel to come out."

Engineer Moran was emphatic in stating that he didn't throw any matches or anything else around that caused the fire at the engine house. He said that he was told that Hank Simpson saw the fire first.

George Simons testified in part as follows: "I am a company man and do odd jobs all over the mine, or rather in the Dunmore vein where the fire was. When the fire started I was inside about two hundred feet from the fire towards the tunnel. My butty said, 'Do you smell anything?' I said, 'I smell something burning like rubber.' Then after a little while I said, 'I believe that is a brake band kind of hot.' In five or six minutes I saw the big smoke coming, so we started out through the smoke from the engine house. I ran as fast as I could to the other engine house and told a fellow named Micheson to telephone up to the mountain to get the men out as quick as possible.

He asked, 'What is the matter?' I said, 'The engine house is on fire.' After that I went back to get the hose to try to put the fire out. Hank Simpson, my butty, and myself were the first two to fight the fire. Then Parfrey came and a fellow named Croup and his butty came, and I don't know who else came after that. At this time it was about a quarter to nine. Mr. Birtley came in, but I can't say what time he came in. When I first saw the engine room it was full of blaze and smoke, and the blaze seemed to be right on the floor. I passed the cars on the branches; I believe there were 12 empty cars on one road and possibly 15 loaded cars on another road. I passed between them and went right out to the tail rope engine house. I am not sure whether the engineer telephoned to the office or not, but he went to the telephone, as I left at once to get the hose on the fire. Simpson and myself carried the hose, which was in 50 foot lengths, to the water plug, which was about 400 feet away from the fire. We couldn't connect with the plug in the engine house on account of heat and smoke. It took us from ten to fifteen minutes to make connections and get water on the fire. I first saw the fire about 8.35." In answer to the question, "You saw what was on fire?" He said, "Yes, sir, and it was dangerous for everybody inside of it. Nobody could get in through that with safety to get the men out. The smoke was too strong. I saw Knight and Dawes going in, but it was before we smelled the smoke and they knew nothing of the fire then."

William Micheson testified in part as follows: "I am the tail rope engineer. About half past eight that morning Henry Parfrey came and told me to telephone to the tunnel workings that there was a fire in the North slope engine house. I telephoned the old nipper tending gate on Perry's heading that he should get John Bray and see if the mine foreman was inside; that they should tell the men to get out as quick as they could, as there was a fire in the North Slope engine house, and he answered 'All right.' I then went over to where the fire was and met Leo Winters, the driver boss, who told me to telephone for Mr. Birtley, which I did right away. I phoned Mr. Birtley right after I phoned to the tunnel. The telephone to the tunnel was always in good condition, as we had to use it as high as a dozen times a day, and often more, to see whether the coal in there would be ready to be pulled out. The telephone has not been out of order for a year and a half, since I have been working there."

Harry Simpson testified in part as follows: "I am the pipe line man. On the morning of the fire while on our way out from the tunnel junction we smelled smoke. 'There must be fire somewhere,' I said. My partner said, 'No, I don't think so; it is the brake band. They use graphite on that and in running you can smell it.' I said, 'No, it isn't that; it smells like rubber and I will go back.' He said, 'All right. I will go back too.' We started down the branch; the smoke was pretty strong. We got by there and reported; gave the alarm. The first men I saw were Leo Winters and Hank Parfrey. I told them that the North slope engine house was on fire and that they should go to the tail rope engine house and telephone the men to come out."

Henry Parfrey testified in part as follows: "I have been employed at Pancoast six years. My duty is to attend the junction for the tail rope engine. That morning I met George Simons coming down the tunnel road. He said, 'You have a fire here,' and we said 'Where?'"

At that time Leo Winters was coming up the foot branch, and he said, 'In North slope engine house.' Then Leo and I ran in, but couldn't get there on account of the smoke coming down from the water level branch. Simons told me to go and phone to Bray to get the men out right away, and I did so. Jake Bray came to the phone. He asked me what was the matter. I told him there was a fire in the North slope engine house and to go and get the men out. He said, 'There is always something the matter.' I went back to the fire then, and by that time they had the hose connected and we started to fight the fire. I telephoned from the tail rope engine house; it was about eight o'clock, as we had three trips then up the plane.

F. G. Wolfe testified in part as follows in answer to questions given by juror Blewitt: "I am chief engineer of the Pancoast Coal Company. The surveys are made by our mine corps; the notes are sent to the office; there they are calculated, checked and plotted on the map. As soon as the plotting is completed I go over it myself on the original map. The Dunmore No. 2 vein, which lies immediately above the China, has almost completed first mining; the China vein lying so close beneath the Dunmore No. 2 it is necessary that each chamber in the China be driven directly underneath the chamber above it, and that each pillar be placed directly above the pillar underneath that in order to keep up the roof and mine the coal." In answer to a question he said. "The distance that Moran had to travel between the two engine houses in which he worked is 1,450 feet."

Thomas Cook testified in part as follows: "As a rule I am rope and pulley man, that is, company man. The first thing that morning my butty and I went to the plane and while going towards the tunnel a car got off, so we helped to put it on. Just at this time Walter Knight and Isaac Dawes came along and they helped us to put the car on the track. Then they went into the tunnel, and we fixed one pulley, and I went to the old engine house for two more pulleys. When I got there a fellow called Crannbow said, 'There is smoke down there, Tom.' As soon as he said that I ran down to the East slope, and found the smoke was coming over the dip back out from the tunnel and going down the slope. I said, 'My God! the tunnel men must know about this or they will be lost.' I ran to the engine room and said to Micheson, 'Phone into the tunnel; Knight has gone in there and phone to him to get the men out; there is a big fire.' Micheson said, 'I have notified them in there.' He must have telephoned because my boy who was in there said they had a telephone message." In answer to the question, "Your boy said he got a message from Micheson?" he said, "Yes, sir. They got the message and got out, or they would be there."

John Wrobel testified in part as follows: "I am a miner's laborer; the miner's number was 280. I worked in Perry's gangway. On this morning a runner came with the driver and said it was 'all over.' That means quit work. One of the men that said 'all over' was Arthur Greshan. I think it was half past eight or nine o'clock when we were told 'all over.' There was plenty of smoke, but always more coming. We were told by a runner named John Mahalki that the engine house was on fire. We sat down in the airway about half an hour; then with other fellows went out."

Arthur Greshan testified in part as follows: "I am a driver in the China vein in Perry's gangway. I was up in the heading and a driver named William Kerris came running up and said it was 'all



over.' After a little while the runner came running up and said, 'Hurry up and get the men out,' and we got the men in a row, and went in the heading and got Perry and he led us down that way as far as the smoke and he left us. So we went back to the heading again and we went down the manway again, down as far as the smoke. We came up again, and couldn't go up, and we went up again and down the manway to try to get out; went up around and down again, and tried it for the fourth time. We rushed through it some way: I don't know how we got through. We were only notified by the runner, who was down at the branch, and the smoke came down on him and he came running up. Then we called, 'Come, hurry up, miner, laborer, come down; there is something on fire, or you can't get out.'"

John Mahalki testified in part as follows: "I am a runner in Perry's gangway. About half past eight, while eating, this old man the nipper, his name is Mike, came up and said, 'John there is lots of smoke here.' Then I got up and looked and saw the smoke right behind me. I asked him, 'Is your gate on fire, Mike, or any canvas anywhere on fire?' He said, 'No.' 'Well, what is the matter?' I said. Then he told me that a party telephoned that the engine house was on fire. When he said the engine house was on fire I stopped a driver, who was about 100 feet from me, and told him to go up and tell all the men it was all over. I then went through the slope to the telephone to find how we could get out. I tried the phone three times, but got no answer. I then went to Jake Perry and told him there was lots of smoke, and I said, 'Jake, you take us out; you know the way.' So we went down the airway, the bottom of the airway, where there are two trap gates from the airway into the branch again, and he took us all into that smoke. I stayed behind. I wouldn't go in, but all the others went in. I called on them to come back. In about five minutes they came back. I said, 'Come on, boys, let us get out.' Then we met two drivers running from the East slope. I asked, 'Do you know the way through here?' They said they did, but that they were afraid to go that way on account of gas. I said, 'You may as well die of gas as of smoke.' We kept the lights down as low as we could while going through a cross-cut to a chamber and found a miner and laborer at work. I said, 'Drop your tools and go out.' We went down through the chambers, got on the main road, and Joe Gall, the runner from the East slope, was there and directed us through. We went to the East slope and had to go through a little smoke. We went up the slope and then beat it to the foot of the shaft. As we got to the foot Mr. Birtley came down the shaft. That is all I know."

Leo Winters testified in part as follows: "I am the driver boss. I was sitting near the tail rope engine house about half past eight, I think, when Simons and Simpson came out hollering 'Fire! the slope engine house is on fire.' So we went up to the engine house and tried to get to the hose connection in the alley way leading to the engine house, but the smoke was coming out so strong that we couldn't get to it. So I sent word to the tail rope engine house to get the men out. Mr. Birtley came in about nine o'clock, and asked me if the men in the tunnel had been notified and I said they had been notified by phone. The engineer came in shortly after I sent him word, and I asked him if he had got an answer over the phone, and he said he had got an answer

from Mike Kozey. The engineer's name is William Micheson, and he came to the fire before Birtley came in. I worked all day putting out the fire. I started to help take the bodies out at half past seven in the evening and remained until they had all been taken out, about ten or eleven o'clock the next day."

Mike Kozey testified in part as follows: "I am a nipper (door tender), tending to the doors and also tending to the telephone in case anything was wanted. I went to Perry's road to find if the trip was ready, and saw Jack Bray run to the telephone, and then from the telephone he came and told me there was a big fire and that I should run to Perry's road and tell all the fellows to look out for the fire. I went and told the runner, John Mahalki, to hurry and tell all the miners to go out, that there was a big fire, and I went back to the door I was tending, but there was too much smoke. I was within ten feet of Bray when he was talking over the phone and all I heard him say was 'All right.' Bray went to the mountain to notify the other men. When Bray told me to notify the men you could hardly notice the smoke, but later it came in big volumes. After that we went to Jake Perry's heading, and there found four miners, three laborers, two nippers and two drivers. We were all in a group, but without a light, and a miner by the name of Rubal gave us oil. Then we went to the airway where Jim Reed has a gate (a trap door) or a door or something tending." Then he explained how they went out, about the same way as the others did.

Paul Bright testified in part as follows: "I am a mine foreman in the upper veins called Diamond Nos. 2 and 3. About twenty minutes to ten in the morning I was informed that there was a fire in the Dunmore vein. I then went down to the Dunmore vein through No. 2 shaft and was told that the North engine room was on fire. So I went there at once. I saw Mr. Birtley and he asked me to make an effort to get in to the men in the tunnel. I made several attempts, but failed on account of the heat and smoke; it was impossible to go and live. It was then about ten o'clock, so I came back and informed Mr. Birtley that I could not go in through the smoke, and then began to help fight the fire to get it out as quick as possible, and I employed the men around there to stand timbers, to keep every one safe while fighting the fire. After the fire was out we went into the tunnel and soon after entering we came to the body of Dawes, the fire boss, and then we went right on in the tunnel until we came to the body of Knight, the mine foreman, half way between entrance and bodies of dead; then we retreated back to the foot of the shaft." Then he recited how they got the bodies out.

#### REPORT OF INSPECTOR

This disaster occurred on the morning of April 7, about 8.30 o'clock. A fire in some way was started in the North slope engine house in the No. 2 Dunmore vein and the flames were communicated to the props and double timber and a trip of twenty empty mine cars standing on the head of the slope along side of the engine house on the intake airway. Two streams of water were immediately brought to play

on the fire and the men inside of the fire were notified as soon as possible, but the smoke from the fire was carried to and through the tunnel that was driven from the No. 2 Dunmore vein to the No. 4 Dunmore vein, or China vein, before the men could make their escape through the second openings. The result was that seventy-two of them were overcome with the smoke from the fire and died before the fire could be extinguished. The fire was under control at 2 p. m., of the same day. I was away from home at the time and did not hear of the fire until late in the afternoon. I arrived at the mine at 4 o'clock in the afternoon and found several officials of other coal companies there along with the Government First Aid Corps.

I at once went into the mine with Superintendent W. L. Allen of the Scranton Coal Company, Superintendent Henry G. Davis, Assistant Superintendent Henry E. Harris, and William E. Watkins of the Delaware, Lackawanna and Western Railroad Company, Daniel Young, District Superintendent of the Scranton Coal Company, and Superintendent Joseph V. Birtley and Mine Foreman Paul Bright of the Pancoast Colliery. We found that Joseph Evans of the Government Rescue Corps was overcome by smoke while trying to rescue some of the men and Doctor J. E. Jacob and myself and some of the Government Rescue Corps worked continually on him for over an hour and a half trying to save him, but he had inhaled too much of the smoke and could not recover. He died without regaining consciousness.

We then proceeded down the slope and through the East tunnel into the China vein to search for the bodies of the unfortunate victims. The first body was that of Fire Boss Isaac Dawes, who was found on the main gangway road just inside of the tunnel and about three hundred yards from the burning engine house, with his face pointing outward as if in the act of coming out to see what was wrong. The body of Mine Foreman Walter Knight was found in the middle of the track at the extreme end of the main gangway road with his face pointing inward indicating that he was trying to reach the men who were working on the inside end of the gangway. Twenty-one victims were found in one group in the middle of the gangway junction of Perry's gangway all with their faces pointing outward indicating that they all fell while trying to escape. The others were found along the different gangways right and left of the main gangway road. After finding all of the victims we at once organized several parties of men with stretchers and blankets and proceeded to carry out the dead. Those that were identified were immediately taken in charge by the different undertakers and prepared for burial. The unidentified were taken to the carpenter shop on the outside which was turned into a temporary morgue and laid side by side until they could be identified by their families or friends. At 7 o'clock the next morning all of the dead bodies had been taken out of the mine. When the recovery of the bodies had been completed, little work was required to put the mine in condition for operation, except cleaning up the roof that had fallen when the supporting timbers burned away and removing the remains of the twenty mine cars that were left but a twisted mass of iron. I notified Doctor James F. Saltry, Coroner of Lackawanna County, by phone, Sunday morning, April 9, to proceed at once to hold an inquest to ascertain who, if any, was at fault.

## REPORT OF CORONER'S JURY

To James F. Saltry, M. D.,  
Coroner, Lackawanna County, Pa.

Dear Sir:—

The Coroner's Jury empanelled to investigate the cause of the death of seventy-three persons in the Pancoast Mine of Price-Pancoast Coal Company, Throop, Pa., on the morning of April 7, 1911, beg leave to report as follows:

Immediately upon being sworn we endeavored to gain entrance to the mine to familiarize ourselves with the various lifts of the China vein and that portion of No. 2 Dunmore vein, wherein the fire occurred in the engine house which is directly responsible for the death of the men from smoke. Our desire in this direction was not gratified for the reason that the fan was out of condition and under repair. As soon as the fan had been adjusted and in working order, we again visited the mine making a thorough examination of the site of the burned engine house and the surrounding headings and airways, besides visiting on the same day, the tunnel leading from the No. 2 Dunmore vein to the China vein; Perry's and Bolton's headings; the East slope and the North slope and the second engine house at the head of the North engine house. This visit did not enable us to inspect the entire mine, so we subsequently returned and examined all the other portions of the China vein not explored on our former visit.

Between these visits to the mine we began the taking of testimony in court room No. 2 in the Court House in the City of Scranton, Pa., and were continuously at work every day, either taking testimony or examining same from stenographic notes. We feel that we made as thorough investigation of this accident as our ability would permit and if we failed in any respect, it was not in any way due to inactivity or lack of binding obligation to procure all the facts pertaining to the case.

The accident was an unfortunate one, serious beyond all comprehension and the greatest which has occurred in the Northern Anthracite field in over a generation. We cannot refrain from saying that we believe the loss of life might have been much less serious, or possibly all the men might have escaped if an engineer had been stationed permanently at the engine house where the fire started. As to the fire itself the officials of the company maintain they did not think it would be serious and that they could extinguish it in a comparatively short time, without injury to the men or loss of time to them or the colliery. Subsequently, however, it proved their error of judgment and as a result the men probably went to their graves through the overconfidence of the management who did not realize the seriousness of the situation.

It has been contended by many witnesses that the fire had been burning quite a length of time before it was discovered and that in all probability many, if not all, of the men were dead before it was extinguished. Be this as it may, the fact remains that the jury can-

not condone the apathy of the management in centering all their efforts on the fire instead of also immediately notifying all the men of their danger when the fire was discovered. We are also of the opinion that the fire might have been fought on entirely different lines with better results from the gangway side and that if such had been done, the loss of life would not have occurred, or in any event would not have been so serious; this mistake was a serious one.

The investigation of this terrible catastrophe has impressed the jury that the mining laws are lax. Here is a mine which old and experienced mining men and mine inspectors swore was the best managed and laid out colliery in the valley, practically complying with the letter of the law; nevertheless, this catastrophe has proven that the mining laws are inadequate and susceptible of many necessary and vital amendments. We are convinced that sufficient inspection was not given this mine by the constituted state representative, namely the mine inspector.

It appears to us from our investigation that many innovations may be introduced for the health and safety of the men employed in and about the mines with but little cost and great permanent beneficial results. We suggest the Governor recommend to the Legislature without delay, or call it in special session, for the enactment of a law or laws, which will compel the elimination of all combustible buildings or material, including coal oil or kerosene lamps in engine rooms and pump rooms, in all coal mines or collieries; that the engineer at every engine house in or about a colliery be compelled to remain on duty continuously during his day's work; that steel mine timbers should be used wherever directed by the mine inspector; that the number of competent and aggressive mine inspectors should be increased to guarantee inspection and enforcement of the law; that they should be selected from those holding mine foreman certificates and elected on a nonpartisan ballot by the qualified voters employed in and about the Anthracite mines; that telephones be used in all the mines and that the wires of the same be extended to the most remote parts of the mine wherein men are employed; that danger alarms and danger signals be erected for the further safety of the men; that there be employed in each vein at least one man to superintend these devices and keep them in constant repair, besides being compelled to make the men working in the lifts of the veins familiar with their object and their general application and that this employe also be authorized to compel all new employes to familiarize themselves with ways of exits in case of disaster; that every colliery should have relief corps, each member of which could be conveniently called to a central point in a minimum time, to take charge of mine in case of accidents and offer relief and succor to the injured or those who might be in imminent danger of loss of life through such catastrophe as the above and that the Department of Mines insist on its inspectors doing their full duty under penalty of immediate dismissal, and exercise a more rigid supervision over their conduct.

#### Verdict of the Jury

The verdict of this jury is, That John Baravalla, Louis Korman, Lawrence Reitz, et al. came to their death on the morning of April 7,

1911, through inhalation of carbon monoxide, the direct cause of which was the burning of a hoisting engine house at the head of the North slope in the No. 2 Dunmore vein of the Pancoast colliery, the flames from which communicated with contiguous timbers in the entrance to the engine house and communicated from thence to the roof supports and cars in the main haulage way, causing vast volumes of smoke to be driven into the China vein by the great velocity of the air current from the fan. We declare that the cause of the fire is unknown and have no hesitation in saying that we believe overzealousness of the management to put out the fire in the engine house, and forgetfulness to a degree for the safety of the men in the mine contributed largely to making this accident so appalling.

Edward F. Blewitt,  
Foreman of the Jury.

Enoch Williams,  
Robert Gillard,  
John P. McDonough,  
William E. Lewis,  
James Grady.

Scranton, Pa., May 8, 1911.

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#### MINE FIRE AT THE GIPSY GROVE BREAKER

A very unusual accident occurred at the Gipsy Grove breaker. A coal chute in the breaker caught fire in some unknown way and two of the employes at the top were killed. As several other persons were at the top when the alarm of fire was given and made their escape, it is presumed that the men who lost their lives could have escaped also if they had availed themselves of the opportunity afforded them and not delayed too long. An inquest was held in connection with the accident at which many witnesses were examined.

Some of the testimony is given herewith, together with the report of the Inspector of the district, the report of the Coroner's jury and the verdict of the jury.

#### TESTIMONY OF WITNESSES AT INQUEST

John Taylor testified in part as follows: "I am the hoisting engineer at Gipsy Grove mine and have been since 1871. The first I heard about the fire was when the headman, Michael Walsh, whistled down and said, 'There is a little fire down in the breaker somewhere.' I walked to the window and saw some smoke away back at the rear end of the breaker. I looked on possibly a minute or two, and telephoned down to the footman, 'You may as well take the car off the cage and come up to the landing with the other footman, as there