



Reports

#2 Cherokee Mine

ABSTRACT OF CORONER'S INQUEST
 MINE NO. 2, CHEROKEE & PITTSBURGH C & M CO.
 FRONTENAC, KANSAS
 NOVEMBER 9, 1888.

No. killed: 40.

Date of inquest: Nov. 11-15, 1888. Coroner G.A. Fisher, Crawford Co

Coroner's verdict: The above named came to their death by an explosion; powder and gas being the main factors. We also believe the extremely dry and dusty condition of the mine contributed to the violence of said explosion.

It is the belief of the jury that the said explosion originated in the fourth north entry off the east side of shaft No. 2 of the Cherokee and Pittsburg Coal & Mining Co. at Frontenac, Kansas, and was caused by the igniting of powder, the same coming in contact with other explosive properties.

It is still further the belief of the jury that if the company had kept the entries well sprinkled, and paid more attention to the gas, the said explosion would not have been so great, therefore, we the jury consider the company censureable.

DARIA SENOTT, practical miner, 25 years experience stated that he was acquainted with the mine. At bottom of shaft found damaged timbers, 2 or 3 dead mules and fallen slate. Further on found 2 or 3 dead men. Shaft is broken east and west, then runs north and south McKinlay asked me to take charge, told him I would. Proceeded to examine northward, fixing up as we went to room No. 2, found dead men, continued on till we came to rooms 3 and 4, found 2 dead men. In 4th north found 8 dead men. Came back then and where it broke off to north 3rd, and conducted air, where we found 8 dead men. Came out and asked McKinlay where to investigate next. We took ventilation to 1st north where we expected to find two men, did not find any. Were then relieved and came out.

At 3 pm took charge of 4 men. Found men who relieved me. Went into No. 1 on right, found no men. Went next to west side, found cars off track, drivers buckets, etc. and door broke down. Proceeded found one door down, took our ventilation up to north entry with gang of eight men, then came to face of 1st north, everything clear, visited every room, came back to bottom of shaft. Next work was west. Explored face and side entry. Next was 2nd south, found it in good condition. There was good ventilation. Air was a little hot where we went in. After this was driven out ventilation was good. Found 15 dead besides 3 we passed. Think the explosion originated in the third north on the east side. The explosion was about 400 feet from main shaft. It showed its mark across the main shaft going from 1st north to 4th north, escaping to the fan shaft.

My idea is that the cause was a powder explosion for the following

reasons: This is acknowledged by the best authorities that powder smoke will flash or explode. If the hole is drilled too deep or on the solid, the powder will blow out in a flame, that is an explosion itself and when there are so many shots fired in that way the explosion may be so large as to extend to all powder that may be around or in a man's tool box. When a mine is dry and dusty it will aggravate the explosion and cause a terrible calamity. In my judgment that is this case. For the following reasons: That we examined for gas with a safety lamp and found none. My reasons for not finding any gas had that been the case. Had we a gas jet in this room we open it, close the windows and doors and leave it so for several and return, we find gas. If there had been gas giving out in this place after examining these rooms we would have found it on our return. I do not say that this was a gumming shot, although it will cause an explosion. Had the mine been giving gas we could have found about 5 per cent after the explosion. If an explosion should occur in a wet mine, it would not be so bad as in a dry mine where there was dust.

My theory is that there were too many shots fired at the same time and that the flashings coming in contact with others caused it. The State law says that they shall take 5 pounds of powder, but I do not know that they have obeyed the law. Blackdamp is where there is no pure air. No human can live in it. Then there is gas or explodable gas where if you carry a light it will explode. I saw some powder cans or kegs, they were blowed to pieces. That is the first time that I was ever in the mine.

Daria Senott

ALEX MITCHELL: I reside in Frontenac. Have worked in No. 2 shaft since January 24. Have been a miner for 20 years. I was in the mine when the explosion occurred, about 5 p.m. I was preparing my shot before coming home. Heard several shots fired. Heard one a little stronger than usual. A gentleman passed a remark to me about it. I answered yes. I work in 3rd north on west side, coming to entry found door blown off, also another door off. That is the first I knew of it. Going toward main entry found men returning. I made an attempt to get out, was drove back by afterdamp, tried it at another point and was drove back. Tried the main west entry and got out. Was followed by 8 or 10 men. Coming out found something was wrong. Found men down, some injured, overcast was blown to pieces. After a while crossed to other side, found more men disabled. Going in on main east found stoppings blown out on cross entries, about 150 feet from main shaft there was a heavy fall. We closed these breaks off temporarily as we went along to send air into main entry. I only ventured 50 to 75 ft. beyond heavy fall. Was tired and then came out. Came up air shaft and found them trying to arrange to bring up disabled men. The mine was well ventilated. A very dry

mine. O'Hara found a little gas going across horseback. Found no other indications of gas. It never did burn except on one occasion that was going across horseback. It was very trifling so do not think it would cause an explosion. Have no idea of what caused it. There was 2 or 3 shots fired until the large explosion came. I was considerable distance from the main shaft. I worked on the west side of the shaft. Shots will average from 1 to 3 feet. With one exception I never used over 3 feet of powder in a shot. About 3 pounds of powder to that size shot. We take powder down in kegs containing about 24 pounds of powder. Keep it in a box for that purpose at a reasonable distance.

Alex. S. Mitchell.

DOUGLAS JENKINS: Worked at coal mining 18 years, tracklayer. Was in mine on day of explosion. Was in the 3rd south on west side. Was all through the rooms where the explosion occurred on the 10th. Do not know in which room it occurred. Did not find and gumming shots.

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I think the explosion was caused by powder smoke and dust. Do not think the powder in the cans or kegs caused the explosion. Noticed some gas in 3rd north, 4th and 5th rooms. We did not desire to take any chances about the gas. Discovered gas once in passing through a horseback. There was gas reported in this room for 4 or 6 days before explosion took place. Was no room adjoining it. The employment of inexperienced men would likely cause such an accident, by not knowing how to use powder. I do not know whether inexperienced men have been employed or not as I have not paid any attention to the matter. The mine boss several times stopped men from firing shots when in his judgment they were not put in right.

Douglas Jenkins.

E. J. MATTESON. Miner for 30 years, began first in Indiana, but not steady. Was in mine at time of explosion.

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My opinion is it was caused by the settling of fine dust in the rooms where the shot was fired. A vast amount of dust is found and hardly ever gets out of the room. When a shot is fired it drives the fine dust back into the rooms. There has always been gas in the rooms when the faults are cut out. I understand in the morning a man goes in and examines. The company has men who examine the rooms in morning before men go to work. Never discovered enough gas to intimidate a man from working. Have known it to ignite and burn a while and then go out. When the room is run up 30 or 40 ft the air becomes dead. Men could not work safely if there was a large

amount of gas in the room. Men fire before noon and at evening. Previously worked in Clay County, Ind. There was not same amount of dust in rooms in Indiana, coal is not so hard. * * * * * About a month ago powder began being issued in kegs of 25 lbs. A meeting was held and it was voted to ask company to issue powder in kegs and the supt. consented on condition that the men sign a petition to that effect. I did not sign it until I felt forced to do so. All that went down in the mine took powder down in kegs. Have heard that the shot went through, so do not know of any men who knew of this fact.

RICHARD WILSON. My occupation is mining and farming, have been so for 31 years. Was not in the mine at the time. I quit the mine on account of daily explosions and said I would never go down again. It was between 2 and 3 weeks ago I quit. It was when the explosion occurred that burned 4 men. The explosion was caused by gunning shots, by men who did not understand mining. Have seen the fire shoot back from 100 to 200 feet, and have been singed by it. Was in No. 1, began Jan. 1st, 1887. Began work there at first was there when 2 men were burned. Saw the room after the shot was fired, Found no gas and never did. That was caused by an undercharge of powder. It was not strong enough to move the coal and shot back. We stepped in beside the pump and saved ourselves. The dust always ignites. Have never seen gas in these mines except when cutting horsebacks or slips. When you pass through horsebacks the gas comes. Began work in No. 2 about Sept. 8. The air is good as in any mine. I saw the hole where the 4 men were burned. The hole was drilled on the solid. The concussion of the shot ignited the dust. Examined it after the shot had been fired. I am satisfied it occurred in the 3rd south entry. My son was found by the keg of powder preparing a cartridge. Had the fire been there it would have exploded. It had gone into the main east entry where the dust had accumulated in vast quantities. Think his death was caused from after-damp or bruised from coal. My son was in the 10th room in the 3rd north. There were daily explosions and I talked with Row and told him I would not work. The men who worked there were not experienced. They worked without shoes, shirts or hats. I told the pit boss I would not work there any longer. He said it was not his fault, he wanted good miners. He said they had brought six and they took them to No. 3, and he said he had all he wanted of that kind and said they are not qualified to mine here. I attribute this accident to employment of inexperienced miners. I said two weeks ago last Sunday to Dr. Fischer: "get ready for an inquest on the most terrible explosion that ever occurred." It was caused by these men who were not experienced miners.

The miners always measure thickness of coal so that powder placed in will shake it. They have machines here for drilling holes. They used no judgment and put in powder not knowing how much to put in. When shots could not throw coal it blowed out at

the tamping and flew down the room and caused dust to ignite. Have always looked at these shots and always found it the same thing. If the mines are kept well wet these things would not occur. Last spring they used to water well after the Fleming explosion. Since the 4 men were burned the mines were watered,

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ROBERT CRAIG, General Supt of Pittsburg & Cherokee Coal Co. Have been a miner 40 years. The condition of mine was considered first class as to ventilation and everything else. Have driven double entries in each case. Drove entries on side of main entry so that we could split the air in four currents, so the men could have pure air.

Our fans are 14 ft in diameter, capacity of 100,000 cu ft. Did not run fan capacity. Generally 25000 or 35000 feet of air was sufficient. Believe the explosion was from an overcharge of powder and dust. As a general rule they drill their hole in solid or take too much of a grip, and the force of the charge comes back out in a flame that starts the dust and that starts the current and the force grows greater. These mines are as a general dry. Explosions are not so serious where there is a great deal of moisture. We expect in the future to allow no shots to be fired while the men are in the mines. It has been customary all over the field for men to do their own firing.

* * * * * I believe the dry dust adds to the force of the explosion. Have often asked if they have seen gas, and the answer has been "no". Have never found it in any quantity so that it could be detected by the safety lamp. I think the dust increased the force of this, caused by an overcharge of powder. * * * * * The men here refused to cut the coal with a pick and sent a committee to us to demand the use of soda powder or they would refuse to work.

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JOSEPH LAVERICH went down with the investigating party Commenced on main east, to 4th south, 3rd south, 4th north out east side. On 4th north between 4th and 6th rooms on the entry found 5 powder kegs that gave evidence that they had been exploded; went to 3rd north found everything all right to 7th room. At face there was indication of gas. All had safety lamps. My opinion is it began here on the 4th north between 4th and 6th room, as the side of the coal and timbers around there show the fire the most. But my opinion is that it was never exploded by a blast in the coal as I failed to find any place where an unreasonable shot had been fired. Further, I believe that the cause of the explosion really was that the mine is generating enough of explosive gas to load the air as much as it can carry and owing to the dryness of the mine there might have been some powder exploded by some one of the men caused the start of the fire and

the stirring up of the dust agitated by the force of the explosion. The roads were very dry and dusty. In one crosscut thru one of the south entries there were 3 miners tool boxes all locked. The tool boxes are all outside of the rooms. To the best of my knowledge there was not more than 4 shots fired. To the best of my belief the blast traveled both ways. Have been in 3 different explosions in big veins. Here owing to the smallness of the vein the explosion travels both ways. I believe the most furious part of the ~~explosion~~ fire traveled south. Do not think it was caused by lighting of gas from a miners lamp. I believe that it is today generating enough gas that if powder is exploded it would fire the gas and cause another explosion. In Westmoreland County, Pa. in Mt. Pleasant slope, Fayette Co. Pa. soft coal in Connellsville coke region there were explosions of firedamp. In each case the flame traveled against the air. There was no indication of a shot having been fired in Dan Limb's room.

WM. ELLWOOD. Mine boss. Was in mine about 15 or 20 minutes before the explosion. Was afterwards assisting to give circulation of air and assist wounded men, etc. Every morning we have two men go thru mine and examine for gas. Gas has been reported in room 11 on west side. None reported on east side in quantity. There was an explosion in a certain sense caused by a tight shot. Do not think it came out of the room where it was fired. I considered it perfectly safe, and am puzzled to think where the force could have generated to cause such a terrific explosion. Think it was caused by a tight shot igniting the dust in the mine. * * * * *

I think that where a shot blows out back it generates a gas that ignites instantaneously. I am certain that gas had nothing to do with the explosion. Have two men who examine the mine at about 4 a.m. each morning and report at 6:30 to 7 o'clock, and one man who attends to the circulation. * * * * *

We have not watered the mine all summer as the hot air comes down the shaft and condensed in the mine. At the time I speak of we had to put men to place sahes along the track in the entries. The old rooms are dry. - - - - Was instructed to sprinkle as often as it was needed. Either one or two days before the explosion the mine was sprinkled. - - - -

It being a dry strata the hot air we have here in the summer descending into the mine striking the cold air condensed and made a moisture that settled on the roof making it bad, and settled all through the shaft as far as the hot air reached. I sent down as many as 20 cars of ashes, dampening them and spreading them along the road. In these dry mines we are subject to this dust all the time.

JAMES BRUSES Miner for 45 years. Made examination after explosion. * * * * * As we came near the end of 3rd south entry found cars had been blown. We then went to 3rd north, found indications of gas in 7th room. Found shots tamped but not fired. From 4th to 6th room the coal on the side was charred and props burned. I am of the firm conviction that the explosion originated from the 4th to 6th room where it is evident the powder kegs exploded. We found no blown out shots. All shots fired on that side were good shots such as a competent miner would put in. Do not think powder alone would cause such an explosion. Think it was powder and gas in these rooms.

GEORGE W. FINDLAY I am inspector of mines in this state. I received telegram relative to explosion and took first train to Pittsburg, drove to Frontenac. I waited for Mr. Craig and he and I at once repaired to the shaft. Satisfied myself that everything possible was being done for those in the mine by men of experience and ability. * * * * * Returned to 4th south examining shots. There was 4 or 5 shots fired neither one of which is what would be

