

EXPLOSION AT LANCE NO. 11 COLLIERY

REPORT OF INSPECTOR D. T. DAVIS, TWELFTH DISTRICT

February 8, 1916, an explosion of gas occurred at Lance No. 11 Colliery, Lehigh and Wilkes-Barre Coal Company, at about 12.45 P. M., in what is known as No. 5 Slope, Ross seam, 6 East, Southrise gangway, by which 7 persons were killed and one person seriously injured. In order to fully ascertain to what extent No. 5 Slope and slope airway generated gas, tests were made when the slope was idle and all workmen were absent from this section of the mine. One test consisted in opening the two check-doors on Southrise gangway for thirty minutes, which resulted in diminishing the quantity of air provided for the face of slope and slope airway. No gas was found. The second test consisted in opening main doors on 6 East, and leaving check-doors on Southrise still open for a period of thirty minutes. No standing gas was found in any portion of the slope face or slope airway. No indication of a cap was to be observed in the lamp. The only place where gas could be detected by the safety lamp was against the pillar along the anticlinal axis. The first theory advanced by the mine officials was that an outburst of gas had taken place at the foot of the anticlinal along the return airway, that explosive gas had been detected coming from a crack in the bottom rock, the crevice extending a distance of twenty-five feet in length and about two inches in width. I made a test of this crevice, but could not detect any gas.

I also made tests in chambers Nos. 1 and 2 Southrise gangway where the brattices in the crosscuts between chambers had been destroyed, depriving them of the current of air, but could not detect any gas.

The opinion that an outburst of gas took place was rather premature and unfounded. Nothing of a substantial nature to support this theory could be advanced, for these underlying seams had been mined by the slope and slope airway advancing, and as these openings were but a few feet away the coal was giving off gas naturally from this source.

The opening in the bottom rock, about two feet above the vein, may have been an old one and was invisible on account of being covered with the debris of the mine. In this immediate vicinity the props were charred very badly, and I attribute this condition to the main body of gas which had reached this point becoming ignited by a smaller body of gas (by the lamp of Stanley Szuska) on the split of air that contained 17,000 cubic feet per minute, the flame trailing back to the greater body of gas which was moving sluggishly on the smaller split of air 8,000 cubic feet per minute.

I am of the opinion that a large accumulation of gas had taken place in the face of the slope and slope airway, and when the trap door placed in the stone wall between slope and slope airway was

closed and the air assumed its natural course, the velocity of the current was not sufficient to move the body of gas immediately, but lessened the volume and finally moved the remaining gas, which was ignited in the vicinity of the crevice and produced much flame; but the gas was extinguished by the concussion of the explosion that occurred on the main current, (a few of the walls having been destroyed) thereby creating a large percentage of carbon monoxide, (miners' white damp), and a portion of the current of air short-circuited and carried the products of incomplete combustion upon the men, resulting in their suffocation.

REPORT OF COMMISSION OF INSPECTORS

Hon. James E. Roderick,
Chief of Department of Mines,
Harrisburg, Pa.

Dear Sir: As per your instructions, we, the undersigned mine inspectors, on the 9th day of February, 1916, made an inspection of No. 5 Slope, 5 and 6 East, also 6 East Southrise, Ross seam, Lance No. 11 Colliery, of the Lehigh and Wilkes-Barre Coal Company, wherein an explosion of gas occurred February 8, 1916, about 1.00 P. M., resulting in the death of seven persons and the serious injury of one other person.

The object of the inspection was to determine as far as possible the cause of the explosion and its initial point.

No. 5 Slope, Ross seam, and 13 plane, is practically one mile in length, and was driven on the dip of seam on an average grade of 14 per cent. The foot of the slope is one thousand feet vertically beneath the surface. A short distance below 6 East lift an anticlinal was encountered, which divided the vein into three splits. The Upper or Ross seam proper was mined until the seam assumed its original pitch of the slope, and afterward abandoned until such time as a gangway could be driven in the basin at the bottom of the Southrise, and when directly opposite the slope two places would be driven to tap the slope and slope airway. This was the purpose of the Southrise gangway to still further develop No. 5 Slope proper.

On the Southrise gangway chambers Nos. 1 and 2 had been driven over the anticlinal and were going to the dip. Safety lamps were used in the chambers, but the workmen had been given permission by the mine foreman to use naked lights on the gangway. The foreman stated that the purpose of using safety lamps in these two chambers was to prevent feeders of gas from becoming ignited by open lights. Monobel is used for blasting and is fired by an electric battery. It appears that on the day of the explosion, John Davis, section foreman, and William Davis, fire boss, made an inspection of all working places in No. 5 Slope, Ross seam, and then made an inspection of the old workings, which they completed about 11.45 A. M. The fire boss, having completed his day's work, went home. The section foreman, (Mr. Davis) returned to 4 East to eat his lunch and, while

so engaged an explosion occurred which opened doors violently and extinguished the lights of the men employed in this lift. Mr. Davis, with another person, hastened down the slope to 6 East and saw George Gorki, a runner, lying unconscious on slope road opposite 6 East lift. He entered the Southrise gangway to chamber two and found Stanley Szuska, a miner, in an unconscious condition. The evidence of the presence of after-damp in a dangerous quantity was so convincing that in order to save his own life he immediately retreated toward the slope. Feeling the effects of his experience in endeavoring to rescue the men, he sat down on the slope road and was discovered by the mine foreman and others who had reached the scene of the disaster. The mine foreman immediately made an examination of the main doors on 6 East gangway and found them destroyed. The third door, which had been fastened against the pillar, was found in good condition and closed. This directed the current into the Southrise gangway, which enabled them to proceed with the work of rescuing the men employed on this gangway. Unfortunately Mr. Davis did not have the presence of mind at the moment to close this emergency door (which had been erected to meet such a need). The closing of the door would have diverted the current of 25,000 cubic feet of air in the Southrise gangway, and in all probability the lives of several men would have been saved.

The damage to the mine on Southrise gangway was about six sets of timber dislodged and a few others staggered; two check doors and three walls between airway and gangway destroyed; brattice in cross-cuts were destroyed and several props dislodged in chambers Nos. 1 and 2. In 6 East, main doors were destroyed, and between slope and slope airway two walls destroyed. Props were badly charred.

On the morning of February 9, we had decided to commence our inspection on the slope and slope airway, but on account of the walls having been blown down these places had filled with gas. We then proceeded to Southrise gangway, afterward to 6 East workings, and finally to 5 and 4 East. February 10, we made an examination of the face of slope and slope airway, the gas having been removed the night previous. These slope workings are ventilated direct from a shaft located a short distance west of the head of No. 5 Slope extension. 25,000 cubic feet of air, distributed in two splits, are provided for this slope; 17,000 cubic feet are directed in 6 East and 8,000 cubic feet for the faces of slope and slope airway, both currents meeting on Southrise gangway and traveling as one split of air for the remaining slope workings, thence to the fan. This volume of air is ample and adequate for this section of the mine. The fan is the Guibal type, 35 feet in diameter, running 49 revolutions per minute, with a water gauge of 2.1 inches.

After a very thorough examination of all portions of the slope, we are of the unanimous opinion that gas accumulated in the face of No. 5 Slope and No. 5 Slope airway, Ross seam, due to a trap door remaining open, that was erected in a wall between slope and slope airway at the bottom of the anticlinal. The open trap door allowed the short circuiting of the air, which deprived these two places of the necessary amount of air to keep them clear of explosive gas, and the closing of this trap door by some unauthorized person before an examination was made of the faces of these two places to ascertain their

condition, resulted in moving upon the men employed in 6 East South-rise gangway a body of gas, which was ignited by the open light of Stanley Szuska, a miner.

D. T. DAVIS,

Inspector of 12th Anthracite District.

THOMAS J. WILLIAMS,

Inspector of 11th Anthracite District.

JOHN B. CORGAN,

Inspector of 10th Anthracite District.

Verdict of the Coroner's Jury

"That the deceased came to his death February 8th, 1916, at Plymouth, Pa., from inhaling after-damp coming from an explosion of gas in 6 East airway leading to Southrise of Mine No. 11 of the Lehigh and Wilkes-Barre Coal Company." It was decided death was due to an unavoidable mine accident.

EXPLOSION AT HOLLENBACK COLLIERY

REPORT OF INSPECTOR T. J. WILLIAMS, ELEVENTH DISTRICT

On March 9, a serious explosion occurred at the Hollenback Colliery of the Lehigh and Wilkes-Barre Coal Company, in the Red Ash vein, No. 6 Slope, 1st East gangway, at about 12.45 P. M., causing the death of six persons.

As soon as I heard of the accident I went to the mine, entering about 3.45 P. M. I found that a fierce fire was raging in the 1st East gangway, and learned from John D. Joseph, the inside superintendent, that all the men working in this lift, with the exception of one, who had left for his home prior to the explosion, were still in the affected section.

Several efforts were made by Mr. Joseph and other mine officials, together with the inspector of mines, to rescue the men entombed, but owing to the dense smoke and poisonous gases given off by the fire it was physically impossible to explore the affected section. After making some changes in the ventilation we were enabled to approach the face of the 1st East gangway by following the ventilating current up chamber No. 16 from the slope airway. Upon reaching the gangway we found the body of George Horney, the rock unloader, whose clothing was still burning. We then traveled along the gangway to chamber No. 9, or the inside chamber on the gangway, where we encountered a serious fire, the extent of which was such that our efforts to extinguish it by the use of water were of little avail. This in connection with frequent explosions prompted my colleagues, D. T. Davis, Frank Kettle, D. J. Thomas, foreman, and myself to withdraw the workmen until we further investigated. After the investigation we concluded that it would be unsafe to make any further effort to extinguish the fire owing to the dangers present by reason of gas explosions and roof conditions.