condition, resulted in moving upon the men employed in 6 East Southrise 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.

We then went to the surface for the purpose of consultation with the company officials in reference to adopting a safe plan to extinguish the fire. However, it was first unanimously agreed that the lives of the entombed men were extinct, and it was further agreed by all present that any further attempt to rescue them under existing conditions would probably cause a further sacrifice of human life, and that the only safe and practicable method to obtain the bodies of the entombed was to first extinguish the fire by sealing off the affected section of the mine.

Work on the seals was commenced immediately. The points selected for the erection of the first seals were the intake airways, namely, the slope and slope manway, indicated by "A" and "B" on the map. Several minor intakes were then closed and lastly the return.

The erection of the stoppings was commenced on March 10, and they were all completed March 19 and remained scaled until May 14, when the first seals were opened and an effort was made on May 18 to explore the 1st East gangway. This was found impossible on account of a large accumulation of gas. After the removal of this gas on May 19 we explored the section and found the bodies of Edwin Jones, door tender, John Miskin, driver, William Kurzinski, miner, and George Kamconka, laborer, inside of chamber No. 5. The body of Leo Kazenski, miner, was found in chamber No. 8, about 25 feet from the gangway on August 29.

#### REPORT OF COMMISSION OF INSPECTORS

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

Dear Sir: The commission appointed by you to investigate and report the cause leading up to the explosion of gas that caused the death of six persons, in the Hollenback mine of the Lehigh and Wilkes-Barre Coal Company, on March 9, 1916, begs to make the following report:

After a thorough inspection of the mine and the examination of several witnesses we are enabled by the knowledge obtained in this manner to arrive at two conclusions, either of which may have been the true cause of the accident.

Our first conclusion is, that the miner in chamber No. 8 ignited a body of gas by a blast. We are supported in this conclusion by the discovery of the electric battery used by this miner, so placed and adjusted with the wires attached and in such position as to indicate that he had just fired a blast.

We are further supported in this theory by the fact that the coal at the face of chamber No. 8 was of a shelly or laminated character. A coal of this kind would readily permit the miner to over-charge the blast, notwithstanding the fact that monobel (permissible) powder was used in this case. We can readily assume that the hole was probably over-charged and that only a small part of the energy stored up in the powder was consumed in breaking down the coal, and the remaining energy was spent in flame in the open atmosphere, which was no doubt heavily charged with methane.

Our second conclusion is, that the miner in chamber No. 8 fired the blast herebefore mentioned, the firing of which possibly liberated a volume of methane.

The place in which the body of Leo Kazenski, miner, of chamber No. 8 was found, namely, twenty-five feet up his chamber from the gangway road, at the inside of a car that stood in the chamber, would indicate that he was on his way back to the face of the chamber or was probably working at this point when the gas was ignited in some manner unknown to us.

That the volume of gas was large and its mixture with air was such as to permit the propagation of flame only, is manifested by the following facts.

First. That several doors in the vicinity of the explosion, some of which were not more than 150 feet from the initial point of said explosion, were left intact and very little damage was done to any part of the mine.

Second. That the volume of methane was large is again indicated by the discovery of burning timber 600 feet from the initial point of the explosion and the burning of the clothing on Horney's body at about the same distance.

The section of the mine in which the explosion occurred was a locked-safety lamp district. Monobel powder was used for blasting

and all blasts were fired by electric batteries.

The type of lamps used in this section by the miners, namely, the "Davy" is not the lamp commonly used by other coal companies in mines of this character. We are informed, however, that the president of this company, Mr. C. F. Huber, has been considering for some time the adoption of an improved safety lamp for use in his mines.

We further note that the safety lamps used in this mine are cleaned, examined and filled in a poorly lighted room in the mine, which prac-

tice is peculiar to this company.

We feel that rooms in which safety lamps are examined, cleaned and stored, should be located on the surface and kept clean and well lighted, so that any defects or the improper assembling can be readily detected.

Respectfully submitted,

THOMAS J. WILLIAMS,
11th Anthracite District.
JOHN B. CORGAN,
10th Anthracite District.
D. T. DAVIS,
12th Anthracite District.
FRANK KETTLE,
13th Anthracite District.
JOSEPH J. WALSH,
14th Anthracite District.

# Report of Coroner's Jury

An inquest was held by Deputy Coroner Stanley Kuryloski, September 8, 1916, and the following verdict given: "After hearing the following witnesses, William Irvin, George Roberts, John Williams, Michael Williams, James Buttson, Anthony Matuzza, Peter P. Jones and David Thomas, it was found that the decedent, Leo Kazenski, with five others, was burned to death through an explosion of gas caused in an unknown manner. It being an unavoidable mine accident."