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EXPLOSION

Nottingham Colliery, Glen Alden Coal Company
Plymouth, Pennsylvania

On the afternoon of January 15, 1947, an explosion occurred in No. 15 Shaft, Nottingham Colliery, Glen Alden Coal Company, which resulted in the death of fifteen workmen and injury to two others. The fifteen workmen who were fatally injured in the explosion suffered third degree burns, and in practically every instance the clothing was torn from their bodies. Twenty-two men were in the section at the time of the accident. The explosion occurred at 4:50 P. M. in No. 2 Slope extension, No. 9 East, No. 16 Tunnel, Road No. 30, Top Ross seam.

The section is ventilated by means of an exhaust fan, steam-driven, situated on the surface, with a recording pressure gauge of 1.6 inches, and producing 115,000 cubic feet of air per minute. The split in question had 12,000 cubic feet per minute at the intake and 9,600 cubic feet per minute was passing through the face cross-cut on the airway side. Cross-cuts between the intake and return airways were closed with concrete blocks laid in cement. Main doors, erected in pairs to form air locks, were in use on the haulage roads. Board stoppings were used to close the chamber openings and the cross-cuts between the chambers. Permissible electric cap lamps were used by all the workmen in this section, and the miners were furnished with permissible flame safety lamps.

The Assistant Foreman's record book indicated that gas was not found in the affected section for a period of three months prior to the explosion.

The gangway and airway and the chambers to the left off the airway were being driven towards abandoned and inaccessible Top Ross workings in No. 10 Slope, No. 10 Tunnel. In both the gangway and airway, drill holes had been kept 20 feet in advance of the faces as the workings approached the abandoned section. On either January 9 or 10, the drill hole at the face of the gangway tapped into the abandoned workings. Gas was not encountered and the direction of the air current was from the face of the gangway through the drill hole into the inaccessible workings. A drill hole was then started on January 10 in the face of the airway and it also tapped into the inaccessible workings. The ventilating current traveled through this drill hole into the tapped workings. The gangway and airway continued to advance towards the abandoned section, and the air current continued in the direction of the inaccessible workings and no trouble was experienced from gas at this point, nor was gas detected.

At another point in the section, however, a chamber was approaching the inaccessible abandoned workings. On January 14, the day preceding the accident, it was found by the assistant foreman that the face of this chamber was approximately sixty feet (60') from the face of a chamber in the inaccessible abandoned workings. This distance was

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determined by means of actual measurement in the going chamber and by information shown on a map furnished the Assistant Foreman. The map showed both the abandoned and the live workings.

Following this measurement, it was decided by the officials that 20-foot boreholes be drilled in advance of the face of the working chamber, and that such drilling be started on the morning of January 16. In the meantime the night shift on January 14 drilled and fired a six-foot cut in one-half of the chamber face. On January 15 the day shift drilled and fired the remainder of the cut across the face, thus advancing the complete face a distance of six feet (6').

As the situation then stood, based upon the facts collected by the Mine Inspectors, there should still remain a pillar of fifty-four feet (54') between the advancing chamber and the chamber in the abandoned workings.

The night shift crew of January 15 now entered and takes over. This is the fatal shift. The workmen drilled and fired two holes, to form a "V" cut in the center of the place. These blasts broke into the face of the chamber in the abandoned workings, liberating a large volume of methane. This newly made opening was five feet (5') wide and two feet (2') in height. The gas so liberated entered the live workings and it is believed ignition took place on the airway road in front of the chamber that had tapped the abandoned workings.

There were several possible sources of ignition, such as blasting, electric arcs, a defective safety lamp and smoking. All of these sources could be reasonably eliminated with the exception of a "defective safety lamp." This latter statement is made, not because it is believed the ignition was caused by a defective safety lamp, but because the lamps were demolished by the force of the explosion and an examination of them while in this state would not permit the drawing of a conclusion.

The map furnished the colliery officials had noted thereon "January 24, 1933" as the date of the last survey in the abandoned workings. The face of the chamber into which the going chamber tapped was at that time not closed, indicating that when the survey was made work of advancing the chamber was still in progress. However, at some later date and prior to the accident, someone advanced on the map, by means of a pencil, the face of the said abandoned chamber a distance of forty feet (40') and closed the face of the chamber, thus indicating that the chamber had actually been advanced to this point and stopped, when, as determined following the explosion, it had been advanced a distance of about forty-eight feet (48') beyond this point, thus rendering any measurements or precautions taken by the mine foreman or his assistant of no value.

The inaccurate map furnished the mine officials was chiefly responsible for the accident. As fourteen years have elapsed since the abandoned workings were surveyed, and as those whose duty it was to make such surveys and maps at that time are not, at the

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present time, employed by the company, we were unable to fix the responsibility for the inaccurate map.

However, as a cautionary measure for the prevention of accidents of this nature in the future, the Legislature in 1947 provided that no working place shall approach nearer than one hundred feet (100') to any inaccessible workings until after the mine inspector, the mining engineer and the mine superintendent shall have examined the situation and granted permission.

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May 9, 1947

Honorable Richard Maize
Secretary of Mines
Harrisburg, Pennsylvania

Dear Sir:

The commission of inspectors appointed by you to investigate the cause of the explosion which occurred in Schooley Shaft, Schooley Colliery of the Knox Coal Company, Exeter, Pennsylvania, on April 10, 1947, in which ten men were killed and seven injured, has completed its work and hereby submit to you their report.

Yours very truly,

Daniel H. Connelly, Chairman
Mine Inspector, Eighth District

Andrew Wilson
Mine Inspector, Seventh District

Thomas M. Beaney
Mine Inspector, Ninth District

John D. Edwards
Mine Inspector, Thirteenth District

EXPLOSION

SCHOOLEY COLLIERY, KNOX COAL COMPANY
Exeter, Pennsylvania

At 7:00 A. M., April 10, 1947, an explosion of gas occurred in the Marcy seam, Schooley Shaft, Knox Coal Company, resulting in the death of ten (10) workmen and the injury of seven (7) others.

The section in which the explosion occurred, and in which seventeen workmen were employed, is ventilated by means of an