

**Bureau of Mines Bulletin 616:
Historical Documentation of
Major Coal Mine Disasters in
The United States
Not Classified As
Explosions of Gas or Dust,
1846-1962**

**August 21, 1884; Buck Ridge Colliery; Shamokin,
Pa.; 7 Killed**

*(Excerpt from "Mining Herald and Colliery Engineer"
dated Aug. 30, 1884, V. 4, page 447)*

Buck Ridge colliery is located about the center of the Shamokin coal basin, and about a mile and a half southeast of the borough of Shamokin, Pa. The colliery was opened about twenty years ago. The present workings consist of two slopes sunk on the north dip of what are known in the Shamokin region as the Twin seams, which are the two divisions of the Mammoth. The seams are designated as Nos. 9 and 8, the latter being the underlying seam, and average about six and a half feet each in thickness. The slope on No. 8 seam is sunk to a depth of nearly 1,500 feet from the surface, and has an average pitch of about 32°. The workings are very extensive and complicated, the present bottom lift being the fourth lift below the water level, which was worked with eight drift openings.

When the colliery recently changed hands its officers found the system and method of ventilation inadequate and crude, and at once set about improving it. The fan by which the colliery was ventilated was located at the top of the lower lift of No. 8 slope, which was the upcast. No. 9 slope, on No. 9 seam, located a short distance northeast of No. 8, being the downcast. Work was begun at once to change not only the system of ventilation, but to remodel the colliery throughout. To this end an accurate survey of the workings of Buck Ridge and Greenback collieries were obtained. Greenback colliery is located about 1,400 yards east of Buck Ridge, on the same dip, is worked in the same manner, but having been opened a few years later is not quite so extensive. The slope at Greenback colliery is about 600 feet deep, but having an average pitch of about 48° its lower level gangways are only about 300 feet above the level of the lower workings of Buck Ridge, which, as above stated, are 1,500 feet deep. The map of the workings of Greenback shows that the west gangways are driven a distance of 600 yards to the boundary line, where a solid pillar of coal is left standing between the workings of both collieries. This pillar, according to the measurements, is 90 feet in thickness, and the company decided to drive an air course from the lower lift of Buck Ridge through the center of this pillar to the surface, that it might, if necessary, be eventually used to ventilate both collieries. The air-course was driven to a point about 25 yards below the water level workings when a shot shattered the pillar on the Greenback side, owing to the last breast in the first lower lift of that colliery having leaned considerably into the pillar and weakened it. It was then decided not to drive the air-course further in the pillar, and a shaft from the surface to connect with it at the point where it was stopped, was projected and is now being

sunk. We give this description of the collieries here that the manner in which the accident occurred and its causes, as far as they can be ascertained, may be fully understood.

We stated above that No. 9 slope, or rather the slope on No. 9 or the overlying seam, at Buck Ridge was located but a short distance from No. 8 slope, on the underlying seam. The workings of the two seams are connected in numerous places by short tunnels, the slate or rock between them being not more than from 30 to 40 feet in thickness. No. 9 slope was in a bad condition, the timbers being badly crushed. The company's officials decided to re-timber this slope for noisting purposes, and abandon No. 8 to pumping of water & c., and to this end began to work. These improvements had been in progress so long that they were nearly completed when the fire which is now burning in the colliery broke out. On Tuesday evening, August 19, there were ten men working in Buck Ridge, eight of whom were timbering No. 8 slope, the other two being engaged below loading rock. These men left the mine about 2:15 o'clock Wednesday morning, and at 4, when the engineer went to the mouth of the slope there was issuing from it a large volume of smoke which indicated the presence of a strong fire somewhere in the interior of the mine. No. 9 being a downcast, was emitting no smoke, and the engineer immediately started down there to discover, if possible, the location and cause of the fire. He descended without much difficulty to what is called the fifth lift, which is the top of the lower lift, but from this point he was driven back by the smoke of the burning timbers, which was then so strong that it was forcing its way back against the air current. He returned and gave the alarm, which brought the superintendents and many of the miners to the ground in a short time. A gang of men went down No. 9 slope for the purpose of erecting a battery between the two slopes, at the fifth lift. The smoke and gas, however, were then so dense that they were driven back up to the fourth lift, and before they could accomplish anything they were compelled to recede up to the third lift, where they finally succeeded in erecting a battery.

It was decided to put stoppings in all the intakes as far as possible, for the purpose of cutting off the air and turn water into the slope. The mouth of the burning slope was then closed, and a stream of water turned in. The steam pipe which conveyed the steam to the pump below was broken and the steam turned on the fire. All this, however, did little to check it, and the openings being high on the mountain side, it was difficult, if not impossible, to get a large quantity of water to the fire.

Early Wednesday afternoon, it was decided that a hole should be driven from the face of the lower lift west gangway of Greenback slope through the line pillar to the air course, above referred to as having been driven up past that point from the lower workings of Buck Ridge. This would enable them to turn the water into Greenback and down into Buck Ridge and facilitate the extinguishing of the fire, and for this purpose three men were sent into Greenback at 3 o'clock Wednesday afternoon. It was known then that the fire was generating large volumes of carbonic oxide gas, the most dangerous enemy with which miners have to contend, but it was thought that every measure necessary for the protection of the men going into the mine had been taken. The superintendents went with them to the face of the gangway, where the hole was to be started, and gave explicit instructions to keep a drill hole twelve ft. long in advance of the heading as they went. They also made a diligent search for escaping gas from the burning mine but failed to discover any. The orders

were when the drill hole opened to the airway if any gas came through, the hole was to be plugged. The heading was then to be carefully driven to within four feet of the airway and the remaining coal blown out with powder or dynamite. A strong battery was also to have been erected in the gangway a short distance from the face, with a trap door in it, to serve as a protection for the men. The superintendents remained with the men, who were laying the track preparatory to starting the heading in the pillar, until a late hour in the evening. The three men who went in at 3 o'clock in the afternoon were to be relieved at 11 o'clock at night. One man went to the slope a short time before the other men, but having fallen asleep in the boiler-house was not discovered by them, and they went down without him. He awoke about one o'clock, and not knowing whether they had gone down or not, returned home. In addition to these five there were then in the mine a pumpman and his 15-year-old assistant.

About six o'clock Thursday morning, as the fireman was descending the slope, he noticed that the car upon which he was riding passed over the body of a man which was lying on the track, a short distance below the water level. He immediately signalled the engineer to stop and got off to investigate, but finding that he was being overcome by gas, he again mounted the wagon and rang to be hoisted, when he fell over unconscious. He was taken from the wagon on the surface by the engineer, and being resuscitated related what he had seen and what had occurred to him. The alarm was immediately given, and crowds of people collected at the mouth of the slope, but the volume of gas issuing from it was so strong that it was impossible to enter. The experience of the fireman, who narrowly escaped asphyxiation by the gas, admonished all others to not attempt to go down the slope until the gas had been driven out, yet there were those who would have attempted to do so were they not prevented by the others who fully realized the danger of such an undertaking.

The air battery on the west side of the slope was removed, the water level intake closed, and a brattice built in the center of the slope, thus making the east side a downcast and west an upcast as far down as the water level, where an air battery was again built across the west side of the slope. This made the whole slope a downcast from the water level and the west side an upcast from that point. The current was then readily changed and with the aid of the fan a large volume of air was driven down the slope and in the gangway, thus forcing the large body of gas out. About two o'clock Friday afternoon the gas was so far removed that volunteers to rescue the victims of the disaster, were asked for, and they promptly responded. Six men were lowered into the deathpit while the breathless, anxious crowd watched them from the surface. Before reaching the bottom a signal to stop was given, and in a few minutes the signal to hoist was heard. Then the crowd on the top watched with bated breath until the lights of the rescuers came in sight, when a sigh of relief went up from the crowd, that they too had not perished. The exploring party brought with them one lifeless corpse, although several of the brave fellows were almost suffocated themselves. Another party volunteered immediately and rescued the bodies of two others, and then the remains of the boy were brought to the surface. Two bodies were found in the slope, showing that the poor fellows died when they were but a short distance from the pure air, and that if an engineer had been at the colliery to hoist them their lives would have been saved. One body was found at the bottom of the slope in a position that seemed to indicate that he was in the act of signalling to be

hoisted when he fell over and died, and the body of the boy was found by the pump, where he had lain down and died as if he were going to sleep. One was discovered in the pumpway, only about 50 yards below the water level, or about 70 yards from the surface, and the others were found at the face of the gangway, 600 yards from the bottom of the slope, but stout hearts and willing hands were abundant, and although several of the explorers were overcome by the gas and had to be taken out by their companions, the dead bodies of the two unfortunate miners were rescued at two o'clock on Saturday morning.

It is not definitely known yet how the gas escaped into the Greenback workings. One theory is that it found ingress through the cracks in the line pillar heretofore referred to and another is that the pillar above water level is broken. Three streams of water are now being run into the slope, but the workings are so extensive that much time will be required to fill it. Meantime the fire is rapidly advancing upward, and the difficulty of subduing it after it reached a height above water level will be almost insurmountable. The mouth of the slope is at least 100 feet vertical height above water level, and this increases the difficulty of turning the streams into the mine. The origin of the fire is unknown, but the theory of the officials and miners at the colliery is that the dry and rotten timbers of the slope were accidentally ignited by some one of the timbermen who left the mines less than two hours before the fire was discovered.

New York Times
August 22, 1884

CHOKED BY DEADLY GAS

EIGHT LIVES LOST AT THE BUCK- RIDGE MINE.

THE DISASTER FOLLOWING THE ATTEMPT TO EXTINGUISH THE FIRE IN THE GREEN- BACK COLLIERY.

POTTSVILLE, Penn., Aug. 21.—One of the worst mine accidents that has happened in the Northumberland region for many years occurred to-day at the Greenback colliery, near Shamokin, which has just been purchased by the Philadelphia and Reading Coal and Iron Company, causing the death of eight men. The fire which broke out at the Buckridge colliery yesterday is burning with increased fury, and threatens the destruction of the Buckridge and Greenback collieries. General Manager S. B. Whiting, Mining Engineer Luthor, and District Superintendents Booth, Williams, Velth, and Doyle, visited the scene of the fire, and decided that the best means of accomplishing the most good toward checking the progress of the fire would be to drive a hole from the Greenback gangway into the air course of the Buckridge workings, through which a stream of water could easily be forced into the burning mine. Seven or eight skillful miners were selected, and under the direction of Superintendents Williams and Booth the work was begun. The miners were well aware of the dangers they were exposing themselves to, and consequently worked cautiously. The work was so rapidly and successfully pushed forward that the hope was entertained that the extinguishing of the fire was a matter of only a few days or a week.

This morning, however, after Superintendents Booth and Williams, who were constantly with the men driving the hole, left them for the purpose of examining the fire at the slope, Peter Welker, the stable boss, went down the Greenback slope to feed 15 mules which were working inside. On the way Welker noticed a peculiar jarring of the car on which he was riding. He became frightened and jumped from the wagon, and was horrified to find the form of a man lying across the track, with out-stretched hands, trying to grasp the rail. Welker signaled the engineer to stop, and, before he could see who the man on the track was, he was overcome by the deadly gas. But fortunately he fell near the car, into which he crawled. He then grasped the bell and signaled the engineer to hoist. The car soon reached the surface, but Welker, who lay inside, was unconscious. He was taken from the car and restoratives were applied, which had the effect of bringing him to, when he told the story as above.

This was the first knowledge any one had of trouble inside. Frank Wordrop and Valentine Depner, miners, volunteered to enter the slope and ascertain the fate of the men inside. Ropes were securely fastened around their bodies, and they slowly descended into the treacherous hole. They went down several hundred yards, when they signaled to be hoisted up, and not a moment too soon. Almost dead, they were hauled up and properly cared for. This was conclusive evidence that the eight miners and 15 mules still inside had perished. The cause of the accident, as explained by the experts, occurred by the accumulation of a large body of gas in the old workings, which forced itself down to where the men were at work, choking them to death, the mules meeting the same fate.

The names of the victims, all of whom live at Greenback Patch, a short distance from the mine, are as follows:

WILLIAM CARL, 38 years of age, leaving a wife and three children.

WILLIAM CLARK, 38 years old: wife and two children.

PATRICK HEALY, 41 years old; wife and four children.

WILLIAM SHANKWEILER, 39 years old; wife and six children.

WILLIAM TAYLOR, 44 years old; wife and one child.

GEORGE BEEK, 36 years old; wife and two children.

WILLIAM FOX, 30 years old; wife and two children.

ROBERT WHITE, 16 years old; son of Inside Superintendent White.

The news of the accident was quickly heralded throughout Shamokin and neighboring towns, causing the greatest excitement. Several thousand people soon assembled at the mouth of the slope, among whom were the families of the victims. The scene is one long to be remembered—the little ones, closely clinging to the broken-hearted mothers and wives, who eagerly watched everything that was being done toward the recovery of the dead, which may probably not be until to-morrow. Much credit is due to General Manager Whiting and his able assistants, who are risking their own lives and sparing no expense to accomplish this, though it is certain death to any one to attempt to enter the mine, from which issues the deadly gases in large quantities. As a last resort it was resolved at 4 o'clock this afternoon to open the bottom vein slope at the Buckridge, which would change the current of air at the Greenback, and, by means of a fan, force it back to Buckridge. If this plan can be successfully carried out the bodies may be reached to-night. The loss to the Philadelphia and Reading Coal and Iron Company may reach \$100,000, and the employees, who number 700 or 800 men and boys, will be forced into idleness for eight or ten months.

**The Daily Gazette
Colorado Springs
Friday, August 22, 1884**

Death in a Coal Mine

SHAMOKIN, Pa., August 21.—Fire broke out yesterday in the Brick Ridge mineslope, 1,500 feet from the surface. The company bought the Greenback colliery adjoining, the workings of which are higher than those of the Brick Ridge colliery, and the intention was to bore a hole 36 feet long from the Greenback to the Brick Ridge colliery, turn the creek into both colliers and by flooding them put out the fire. While the men were engaged in this work to-day gas suddenly poured in from the butting mine and before they could escape several fell victims to the gas. It is impossible to reach their bodies, as both mines are full of gas and burning. The mules also burned.

LATER—The fire has not abated and there is no possibility of the bodies being reached before to-morrow.

PHILADELPHIA, August 21. A Post Shamokin, Pa., special says: Seven men lie burned in the Greenback colliery near this place, the victims of deadly black damp. Their names are William Taylor, married; William Carroll, married; P. Holly, married; William Shunkweller, married; William Fox, married; Robt White, single; Frank Woodruff and Paupman married. Not since the frightful accident at the Henry Clay works years ago, has this town been so terribly excited. The Greenback colliery is located about two miles east of Shamokin. On Wednesday morning the Brick Ridge colliery on the Renshaw & Johnson tract was discovered to be on fire. Experts decided to drive a hole from the Greenback into the workings of the Brick Ridge. The men who were engaged in driving the hole worked all night and had made good progress, and everything at daybreak seemed favorable to the plans adopted for extinguishing the fire. By 6 o'clock, however, the fire had burned through the old workings, and great quantities of gas began to penetrate into the Greenback workings, and the seven men whose names are given were overcome before they could get out of the reach of the deadly poison. Valentine Depner made an effort to recover the bodies and narrowly escaped losing his own life. Everything possible is being done to reach them, but—no doubt exists any longer of their fate. Eleven mules are supposed to be smothered or burned. Both collieries are likely to be a total loss. Over 600 men and boys will be thrown out of employment.

PHILADELPHIA, August 21.—A special to the Press from Shamokin says: It is not supposed that the bodies of the men in the slope can be recovered before Saturday morning. The loss to the Coal & Iron Co. will probably reach \$100,000, besides a long term of idleness.

**Daily Gazette and Bulletin
Williamsport, PA.
Friday, August 22, 1884**

SUFFOCATED BY GAS.

**SEVEN MINERS' DEATH IN THE
BURNING MINE.**

**While Digging a Tunnel They Are Over-
come by the Deadly Gas, and All
Perish—Impossible to Reach
the Bodies of the Dead.**

Dispatch to the **GAZETTE AND BULLETIN**

SHAMOKIN, Aug. 21. While workmen were digging a tunnel from the Greenback mine to Buck Ridge mine to-day, so as to let in water and flood the burning mine, a volume of deadly gas suddenly poured in upon them, and seven men were suffocated. Their names are: William Taylor, William Clark, Patrick Healey, William Shankweiler, George Beck, William Fox and Robert White. It is impossible to reach their bodies, as both mines are now full of gas and the fire is increasing. Eleven mules were also suffocated or burned.

A LATER REPORT.

A later report says that the fire has not abated, although two heavy pumps have been forcing water down the slope all day. Both the Buck Ridge and Greenback collieries are full of gas, and a number of men on the surface have been overcome by escaping gas. There is no possibility of the bodies being reached before to-morrow.