

NINTH BIENNIAL REPORT  
OF THE  
INSPECTOR OF COAL MINES  
STATE OF WASHINGTON

**December 9, 1899**  
**Mine No. 7**  
**Carbon Hill Coal Company**  
**31 Victims**

**Carbonado Explosion.**

This deplorable disaster, in which thirty-one lives were lost, occurred in No. 7 mine of the Carbon Hill Coal Company about 11:00 A. M., December 9, 1899.

**Condition of the Mine Previous to Explosion.**

This mine throws off  $\text{CH}_4$  gas in considerable quantity, but is one of the best ventilated mines on the coast. A tunnel is driven in from the canon of the Carbon river, about one and one-half miles in length. At the face of the tunnel the uprise to the surface is about seven hundred and fifty feet. It is worked on the chute and pillar system. There being very little covering of gravel on the coal at the surface, chutes are driven through for air, and timber for the mines is taken in from above. This gives a large area for intake air volume, as several of these openings are available for air at the same time. A powerful twelve-foot exhaust fan is operated by water power, and is stationed at the mouth of the return air course at the river. This fan has a capacity of sixty thousand cubic feet of air per minute. The chutes and crosscuts have an area of sixteen feet.

An inspection of this mine was made on October 26th, previous to the explosion, in company with Jonah Davis, foreman, and Reese Jones, fire boss, who were in charge at that time and also at time of explosion. Mr. Reese lost his life in the explosion. The inspector complimented them on the condition of the mine at the time of the inspection. The crosscuts were of large area and everything in as good condition as possible. It is but fair to say in this connection that these men were as competent and careful underground men in their respective capacities as can be found in the state. The following registers of air were made:

On main gangway, return volume, area 52, velocity 490, volume 25,480 cubic feet per minute; at last chute to face of gangway, area 16, velocity 320, volume 5,120 cubic feet per minute.

#### **Air at Intake Air Shafts.**

On hill at intake air shafts, one of 26-foot area, 370 velocity, volume 9,620 cubic feet per minute, and one of 23-foot area, velocity 560, volume 12,880. Total intake measured, 22,500. There were other openings that were also taking air from the surface. The fan was running 180 revolutions per minute.

A careful and searching investigation was made. Governor Rogers arrived shortly after the accident occurred, and remained until the close of the inquest. The jury were taken into and through the mine in company with Prosecuting Attorney George H. Walker, Sheriff A. U. Mills and Mr. A. C. Little. They were conducted by Dio Davis, general underground foreman; C. H. Hamer, of the board of examiners; and the state mine inspector, who had previously examined the mine and ascertained that it was safe to take the party through. The party first went to the face of the gangway, and then up the pitch as far as the fourth crosscut, where the explosion was supposed to have originated.

The following is a summary of the condition of the mine after the explosion: The gangway was fifteen feet beyond last chute 71, this being connected with the first counter, which was driven ten feet inside of chute. At the time of inspection with the jury no gas was found in the face of gangway. A small amount was found in face of first counter. A car was found on the counter twenty-four feet from face. There was a large quantity of carbonized dust on car, also on counter at this point.

Seventy-one chute was not disturbed, 70 chute slightly, 70½ was blown out and caved, car of coal at 69 chute, bulkhead blown out, about five cars of coal on gangway; a barrel of water stood undisturbed on gangway opposite 69 chute. This water was used to wet gangway before firing. Sixty-seven and 68 chutes were slightly damaged, 66½ chute, traveling way. Two trap doors blown out of 66½. Sixty-six chute damp and not disturbed. This goes through to surface seven hundred feet. Sixty-four and 65 chutes slightly damaged and 63 chute wet. Here was found first indication of force from inside towards outside. Sixty-two and one-half, manway, and both trap-doors destroyed. Twenty-five or thirty cars of coal and rock in gangway at this point. Sixty-one chute, gangway sets were knocked out and gangway caved.

For fifty feet from 60 chute out, all gangway timbers were blown down and rock caved. A register of air was made at gangway. Return volume 24,440 cubic feet per minute. A bulletin board is kept at lamp house on foot of incline, at which fire boss makes report of all places where gas is found on his rounds in the morning before the men enter the mines. This was found to show a clear report on the morning of the disaster. This was signed "Reese Jones, Fire Boss."

It was shown in evidence before the jury that an open safety lamp was found in fourth crosscut at 69 chute, together with pipe and tobacco. This was lamp used by Ben Zetler, Sr., and found at his working place.

An inquest was held at Carbonado by Coroner Conrad L. Hoska, from December 11th to December 14th, inclusive, to inquire into the cause of the death of the miners killed at Carbonado December 9th.

The jury returned the following verdict :

"That the undersigned jurors, duly summoned and sworn by Conrad L. Hoska, coroner in and for the county of Pierce, State of Washington, to inquire into the death of the following named persons :

"Leonard Johnson, John H. Jones, John Mellon, David X. Thomas, Howell Meredith, Richard Dare, Matt Nulond, Paul Curtiss, Adam Pavol, John P. Dekonink, Ban Zedler, Sr., T. J. Edwards, Evan Richards, Steve Kromoga, William M. Davis, Jacob Lande, Watkin Jones, Rees Jones, Gustave Hainaut, Emil Hainaut, Henry Soini, Mike Kichinko, William Wilson, Ben Zedler, Jr., John Hill, Andrew Gecey, Evan M. Lewis, Joe Lee, Daniel Davis, John Folta, Joseph Thomas.

" We find from the evidence advanced before the jury that the above named persons came to their death on the 9th day of December, 1899, while working in the Carbon Hill Coal Company's mine, No. 7, situated in Pierce county, Washington, by an explosion of gas from some unknown cause. We also find that the company have used due diligence to keep the said mine free from gas for the safety of the employes, and have complied with the state mining laws, and we attach no blame to the company.

( Signed )

" GEORGE E. MCMARTIN, Foreman.

" ALPHENUS DAVIDSON, Secretary.

" WILLIAM SCULLY,

" FRED EDEMILLER,

" J. C. F. JOHNSON,

" A. E. LAWRENCE,

" Jurors."

The governor called a meeting of the Board of State Coal Mine Examiners to investigate the cause of the explosion. This board met at Carbonado January 4th, and, after making a thorough investigation, returned the following finding :

*To the Honorable John R. Rogers, Governor of the State of Washington, Olympia :*

SIR— In compliance with your request dated the 28th day of December last— that the State Board of Examiners should proceed to the mines of the Carbon Hill Coal Company for the purpose of making an investigation as to the probable cause of the explosion which occurred in No. 7 mine, owned by the Carbon Hill Coal Company, on the forenoon of the 9th of December, 1899, we left Tacoma on the evening of the 3rd inst., and on the morning of the 4th met Mr. D. T. Davies, general superintendent, and arranged to enter the mine. We were accompanied on our investigation by Mr. Evan Lewis, general foreman, Mr. Jonah Davis, underground foreman in charge at time of explosion, David John, present inside foreman, and State Mine Inspector C. F. Owen, and have the honor to report as follows :

We proceeded in the main gangway and stopped inside the trap door, where we measured the return air-way, eight feet by six feet six inches, the anemometer registering a volume of 51,480 cubic feet per minute. Continuing our course thereafter we stopped at the inside switch, about one mile from the entrance, and where it was said the bodies of four men and four mules were found. This would be about 950 feet from face of gangway where the first bodies were found. Proceeding further, it was pointed out to us where the timbering of the gangway had been repaired between chutes 57 and 58, 750 feet back from face of gangway, and where we first encountered indications of the explosion, finding carbonized coal dust adhering to the outer face of the gangway sets, having apparently been lodged there by suction from the force of the explosion outward.

The next evidence of disturbance pointed out to us was where timber had been repaired between chutes 59 and 60 for a distance of fifty feet, the point where the explosion had exerted its greatest force, probably accounted for owing to there being a slight curve in the gangway at this place. One hundred and seventy feet from there, inwards, a few more sets had been displaced, and in most instances the chuteboards and bulkheads had been blown out and now repaired. The first evidence of disturbance back from face of gangway was at chute 67. Between this chute and the gangway face we find carbonized coal dust and charred timber. On the gangway opposite chute 70 we saw one barrel full of water which is used for sprinkling face of gangway before blasting, and we were informed that this barrel remained there during the explosion and was still full of water, indicating that little force had been exerted at this point. We examined the face of the gangway for gas but found none. We next measured the volume of return air at chute 70 and found 6,000 cubic feet per minute passing, while there was also an additional quantity passing through chute 71, being the first chute back from face of gangway. The bulkheads being out in a number of the chutes outside of this, the larger volume of the air was taking that short course to the return.

We next returned to chute 58½ up to second crosscut, and on same crosscut to chute 59, which is the traveling-way. We went up this chute to the sixth crosscut, proceeding on this crosscut to the face where we found a trace of gas.

Thence returning down through chute 68 to the fifth crosscut; thence through this crosscut to chute 69, those having been connected since the explosion. The volume of air passing at this point being 3,600 cubic feet per minute.

From this we continued down to the fourth crosscut, where part of a lamp, a pipe and tobacco are said to have been found. This was B. Zedler's working place. We found a slight blower of gas in this crosscut, air being conducted to the face through a wooden box which carries off any gas produced.

On the third crosscut, at chute 69, a lunch bucket with the lunch spread out on the reverse side of the cover, and also a safety lamp, was said to have been found at the entrance to the crosscut. We were informed that the lamp had been taken out or taken away by the coroner's jury when going through the mine. We continued down chute 69 to the second crosscut, and on the second crosscut over to chute 70; then down to the first crosscut where we found a mine car twenty-four feet from the face; the air passing at this point measured 540 cubic feet per minute in this crosscut which is ten feet in from chute 71.

On the mine car we found carbonized coal dust adhering to the timber. We then proceeded through first crosscut to chute 71½, thence down to the gangway.

We did not proceed about the sixth counter, for the reason that in our opinion the reason of disturbance was confined to a greater or less extent between the gangway and the fifth crosscut.

In arriving at a conclusion as to the origin of the explosion, on examination of the fireman's daily register from the 1st to the 7th of December, no gas is reported except in chutes 66, 67 and 68, which are beyond the region of the disturbance. No report appears on the book for the 9th, the date of the explosion, but from the evidence laid before the coroner's jury, we find that upon the blackboard outside the lamp room, the mine was reported "O. K." on that day.

We further find from the evidence given as to B. Zedler, that he appears to have been an experienced and careful miner, and we would feel inclined to doubt that such a man would open his lamp if there was gas in his place.

Chute 69 was driven forty feet above this crosscut and if gas accumulated from the time of the examination by the firemen the most probable place would be in the face of the chute, which was not being worked at that time, above the fourth crosscut. And, assuming that such was the case, it may have been that the brattice conveying the air to the face of this chute, had been displaced in some manner, thereby permitting gas to accumulate. And it is the opinion of the board, if the gas was ignited at this point by Zedler's light, it would be more reasonable to suppose that a body of gas had accumulated there rather than to have accumulated in Zedler's working place, and being brought in contact in some way with that lamp which was found at the entrance to the crosscut.

After having made a most careful and conscientious examination of the mine and ascertaining from the mine officials and others every information obtainable towards arriving at a conclusion as to the origin of the explosion and cause for such fatality, it is the unanimous opinion of the board that the origin of the explosion occurred by the ignition of a small quantity of gas in some manner unknown, the force due to this raising the dust which, undoubtedly, was the principal factor in this explosion.

We attach herewith a true copy of the working plan of the mine showing where the operations are conducted, and have marked thereon the points where the bodies were said to have been found, the system of ventilating and courses of the air throughout the mine. The system of ventilation we consider very efficient, and dimensions of the various air-ways ample to convey an abundance of air to ventilate the mine properly. Also a copy of rules governing employes of the Carbon Hill Coal Company.

Respectfully submitted,

CHARLES HAMER, Chairman,  
ROBERT YOUNG, Secretary,  
J. I. JENKINS,

State Board of Coal Mine Examiners.

**Victims of the Carbonado Mine  
Disaster  
December 12, 1899  
30 Victims**

Leonard Johnson  
John H. Jones  
John Mellon  
David X. Thomas  
Howell Meredith  
Richard Dare  
Matt Nulond  
Paul Curtiss  
Adam Pavol  
John P. Dekonink  
Ban Zedler, Sr.  
T. J. Edwards  
Evan Richards  
Steve Kromoga  
William M. Davis  
Jacob Lande  
Watkin Jones  
Rees Jones  
Gustave Hainaut  
Emil Hainaut  
Henry Soini  
Mike Kichinko  
William Wilson  
Ben Zedler, Jr.  
John Hill  
Andrew Gecey  
Evan M. Lewis  
Joe Lee  
Daniel Davis  
John Folta  
Joseph Thomas