

**REPORT ON OAK HILLS EXPLOSION**

On February 12, 1921, at 5:30 P. M., an explosion occurred in Oak Hills No. 2 mine, resulting in the death of five men.

The Oak Hills mine No. 1 and 2, are situated one-half mile west of the town of Oak Creek, Routt county, Colo., on the Denver & Salt Lake Railroad, and operated by the Moffat Coal Co., Denver, Colo., of which S. M. Perry is President; R. M. Perry, Gen. Supt., and John Alexander, mine superintendent.

The mines originally were opened on different seams and later connected by a rock tunnel. They are classified as non-gaseous mines. The mines are ventilated by two exhaust fans. One fan taking care of No. 1 mine and part of No. 2 mine. Open lights are used for general purposes. Black powder being used exclusively for blasting the coal and adobe for tamping.

The seam operated, is known as the Pinnacle seam, a very hard, domestic bituminous coal, from seven to ten feet in thickness. Eighty-five per cent of the coal mined is by solid shooting, balance by machine. Shot firers are employed to tamp and fire all shots. Shot firing is supposed to be done after all other employes are out of the mine. An identification check board is in use as a means of ascertaining when all the employes are out of the mine. The cleavage in the seam runs in all directions, intersecting at different angles. Powder was taken into the mines in powder jacks. The machines used by the miners for drilling holes have no side gearing, consequently, all drilling is done with end gear, making it necessary to have room between rib and thread bar to turn crank or handle of machine in drilling rib holes.

I arrived at Oak Hills on the 14th, about midnight, and was informed that the bodies of Edward Hamidy, Weaver Sharp, and Samuel Patrick had been found on the main south entry about 1,000 feet from portal of mine and that there was no hope of the other two men being alive. On the following morning, accompanied by Mr. Smith, engineer in charge of Car No. 2, U. S. Bureau of Mines, Thomas Allen, superintendent of the Elk Creek and Yampa mines, John Harrison, mine foreman of the Haybro mine, Jeff Rhodes, foreman of the Wadge mine, and several other, including helmet crews of the Moffat Coal Co., and Mount Harris, I entered the mine in search for the bodies of Celestin Testas and Hy Wagner. Testas' body was found Tuesday night on a raise entry about 600 feet from face of main south entries. Wednesday, Wagner's body was found in room 6 off L slope. The balance of the week was spent exploring both mines to determine, if possible, the initial point and cause of explosion. In no part of either mine could we detect any indications of fire damp, notwithstanding that we were considerable in advance of the ventilation.

A number of parts of holes that had been fired, were found measuring from one to five feet in depth, drilled into the solid beyond the line of face and drilled at such angles that it was impossible for the charge to do more than blow out the tamping, or a small part of the coal from the muzzle of the holes. The firing of dependent shots was very much in evidence. Holes were found tamped beyond the point where the bodies of the shot firers were found. The number of shots fired each day ran from 80 to 100. Shot firers were supposed to enter the mine at 2:00 P. M. or two hours before quitting time for the purpose of examining the shots to be fired later in the day. They probably tamped all the shots that were ready on this trip. They were supposed to start firing at 5:00 P. M., one hour after quitting time, provided all men were out of the mine.

I am reliably informed that the shot firers were home by 7:00 P. M. nearly every evening. The time taken to fire the number of shots above mentioned is entirely insufficient to do the work properly, as required by law. I was also informed that some of the miners were in the habit of staying at work after quitting time. Because of this practice and the failure of the mine officials to see that all employes, except the shot firers, were out of the mine before shots were fired, Hamidy, Sharp and Patrick lost their lives.

The explosion, in my opinion, was a dust explosion, caused by one or more blown out or overcharged shots, assisted by explosions of black powder in different parts of the mine. The initial point may have been either K & L slopes, M & N slopes, or main or back south entries. The explosion covered practically all of mine No. 2 and part of No. 1 mine. The slopes of mine No. 2 into and including K & L are connected with the third level of No. 1 mine. The forces apparently traveled towards No. 1 mine, spending itself before reaching the rock tunnel connecting the two mines.

The responsibility for the explosion is placed upon the shot firers and the mine foreman. The former for firing of impractical and unlawfully placed shots and the later through his failure to prohibit the firing of such shots.

(Signed) JAMES DALRYMPLE.

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## REPORT ON THE SATANIC MINE DISASTER

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The Satanic mine is operated by The Colorado Collieries Company, at Mount Morrison, Jefferson county, Colorado. It is a vertical shaft opening, about 200 feet in depth. The seam being operated, lies at an angle of eighty-five degrees with the horizontal, dipping to the east. The shaft is located on the west side of seam, rock tunnels being driven through the measures at different levels to the coal seam. The exits or escapeways are driven in the coal seam to the surface at an angle of forty-five degrees. There are two