

COAL FATAL

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
BY C. W. OWINGS

SUBJECT: Coal-dust explosion, Vail mine, Vail Coal Mining Company,
Afton, Wyoming, February 11, 1938.

An explosion occurred in the mine of the Vail Coal Mining Company, 78 miles north of Afton, Wyoming, about 4:00 p.m., February 11, 1938, resulting in the death of five people. The mine is worked only from June 1 to December 15 each year as the snow fall is exceptionally heavy, the drift mouth being at an elevation of 8,200 feet above sea level.

The coal bed is about 7-1/2 feet thick and dips about 22 degrees. The coal is friable and, as it is shot off the solid, considerable dust is thrown into the air, settling on the exposed surfaces of the rooms and entries. The main entry was driven 665 feet on the strike of the bed and the back entry was in only 455 feet. Ten rooms have been driven, the first room to the surface for ventilation. An adequate volume of air was traveling through the mine; a 50-foot air stack had been constructed. The first crosscut in each room was used as an aircourse while the back entry was being driven.

The camp was isolated by the snow and only five men and a woman, the wife of the foreman and mother of one of the men, were in the camp. Two men were working in room 9 and three men were near the drift mouth, probably coming out of the mine about 4:00 p.m. when the explosion occurred.

Three shots were fired at the face of the back entry--two poorly placed breaking shots and one long bottom hole 6-1/2 feet on the solid and "gripping" the rib. The holes were charged with black blasting powder, tamped with "dummies" filled with coal dust. The "breaker" shots did not "pull" well and the bottom shot blew out, igniting the suspended dust. The resulting explosion traveled practically throughout the mine.

The bodies of two men were found in room nine and the bodies of two other men were found outside, about 125 feet from the drift mouth. About 5:00 p.m., Mrs. Baker heard someone call and found the fifth man badly injured about 225 feet from the drift mouth. She assisted him to the house. He instructed her to give him some whiskey, fix the fire, and then go to a ranch house about 6 miles distant to telephone for help. She had to use skis, but had never worn them before. It took her 7 hours to travel the 6 miles. One of the men at the ranch then returned to the mine, using snowshoes. He found the injured man dead. He then entered the mine, going as far as room 4 on the back entry. No one answered his calls so he

returned to the ranch.

Rescuers were flown to the ranch by airplane equipped with ski-type landing gear. The rescuers had to travel to the mine on snowshoes. The road was opened and by 10:00 a.m., February 14, the bodies were recovered.

The property damage was slight. No gas was detected and it is believed that the explosion was purely a coal-dust explosion, initiated by a blown-out shot.

The last examination by the state was on November 10, and when examinations could no longer be made, evidently regulations were disregarded, especially blasting with men other than the foreman in the mine, using combustible stemming and improper placement of shots.

RECOMMENDATIONS:

1. The main and back entries and the connecting slants and crosscuts are to be kept rockdusted to within not less than 40 feet of the face. The floors should be covered with a layer of surface dust. Limestone dust should be used on the ribs, roof, and placed on the cap pieces.
2. The room necks and inbye crosscuts of all abandoned rooms should be caved to seal off all dry areas.
3. Water lines should be laid into the faces of the entries and rooms and all places kept wet until sealed off.
4. Coal should be sheared or undercut before shooting. This coal is fairly friable and can be cut with a pick.
5. No dependant shots should be fired.
6. Only permissible explosives should be used in the mine.
7. The shotfirer should load and tamp all shots. If, in his opinion, any hole is unsafe for shooting either because of dry, dusty conditions, improper burden on the hole, insufficient or unlawful tamping, he should refuse to load the hole. It is unfair to the shotfirer to expose himself to the hazard of firing any shot where he has no opportunity to judge the burden on the shot before loading and does not see the amount of explosive and kind and amount of tamping used.
8. All men with the exception of the shotfirer should be out of the mine and away from the line of the entrance to the mine while the shots are being fired.
9. The mine should be operated only under the supervision of

a foreman certified by the Wyoming State Coal Mine Inspection Department.

10. Work in the mine should be permanently suspended when the road from the mine to Alpine is not open for travel.

11. A telephone connection should be made with the Forest Service line at Young's ranch, which is about six and a half miles from the Vail Coal Company Mine.

The following are violations of direct orders given to the mine foreman in the Vail Mine by the State Coal Mine Inspection Department:

1. That no one but the foreman was to be in the mine when shots were being fired.

2. That clay or dirt from the surface was to be used for stemming and in no case were shots to be tamped with coal dust.

3. Improper placement of shots.

As a result the conditions observed during the examination of the explosion, the above listed recommendations are made.

A telegram stated: Press report mine explosion five killed in isolated wagon mine Vail Coal Company Star Valley Government Lease near Afton, Wyoming Rescue crew on way from Kemmer, Wyoming and Alpine, Idaho roads blocked because blizzard and access to mine only by snow shoes until spring. Have wired State Mine Inspector Rock Springs offering help and phoned to Parker, Salt Lake who advises no action desirable because of inaccessibility of place unless later developments justify Pittsburgh notified.

Wyo.

OK on CMT

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON

C.M. 1450

CONFIDENTIAL MEMORANDUM
(Not for Publication)

~~1. Mrs. Baker~~
~~2. Miss Parry~~
~~3. Miss Sims~~

April 20, 1938

TO MEMBERS OF THE SAFETY DIVISION:

5 Killed
SUBJECT: Coal-dust explosion, Vail mine,
Vail Coal Mining Co., February
11, 1938

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C.M. 1450 - 2

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This memorandum, abstracted from a report by B. W. Dyer of the Mineral Leasing Division of the U. S. Geological Survey, is confidential and must not be published.

C. W. OWINGS

Approved:

D. HARRINGTON

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HARRINGTON
BUREAU OF MINES WASH DC

PRESS REPORT MINE EXPLOSION FIVE KILLED IN ISOLATED WAGON MINE
VAIL COAL COMPANY STAR VALLEY GOVERNMENT LEASE NEAR AFTON WYOMING
RESCUE CREW ON WAY FROM KIMMERER WYOMING AND ALPINE IDAHO ROADS
BLOCKED BECAUSE BLIZZARD AND ACCESS TO MINE ONLY BY SNOW SHOES
UNTIL SPRING STOP HAVE WIRED STATE MINE INSPECTOR ROCK SPRINGS
OFFERING HELP AND PHONED TO PARKER SALT LAKE WHO ADVISES NO ACTION
DESIRABLE BECAUSE OF INACCESSIBILITY OF PLACE UNLESS LATER
DEVELOPMENTS JUSTIFY PITTSBURGH NOTIFIED.

DENNY.

Mr. Fieldner
Mr. Jackson
Mr. Furness
Mr. Secret
Mr. Adams ✓ *ML 2-14-38*
Mr. Stene
Mr. Hedges
Dr. Huff, College Park, Md.
Mr. Forbes - Dr. Schrenk - Mr. Ilsley.
Mr. Harrington
Safety Division
Files

Tila Wyo