



Report

1928

Peabody Coal

REPORT OF EXPLOSION

MINE NO. 30

BLACK MOUNTAIN CORPORATION,
KENNEDY, HARLAN COUNTY, KENTUCKY

by

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BLACK MOUNTAIN CORPORATION,
KENVIR, HARLAN COUNTY, KENTUCKY

May, 1928

About 6:30 P.M. May 22, 1928, an explosion occurred in Mine No. 30 of the Black Mountain Corporation, Kenvir, Harlan County, Kentucky, resulting in the death of eight men, one of whom died from the effects of breathing after-damp while assisting with the recovery work.

The explosion occurred during the night shift when there were sixty-eight men in the mine, of whom sixty-one escaped unassisted. Eight of those who escaped were temporarily imprisoned until ventilation was partially restored, which was about eight hours.

It is believed that the explosion had its origin in the 3 Right Main entry and was due to mud capping a fall of slate with dynamite.

The explosion was propagated by coal dust and involved only a portion of the mine.

No rock dusting had been done in the mine. Water cars are used for sprinkling the roadways whenever the management deems it necessary.

At the time of the explosion, Bureau of Mines Car #4 was located at Lexington, Kentucky. A request for the services of the Car was received at 7:30 P.M. The Car left Lexington, Ky., about 8:20 P.M. May 22, 1928 and arrived at Kenvir, Ky., about 3:30 A.M. May 23, 1928. Part of the trip from Corbin, Ky., to Kenvir, Ky., was made by special engine, as there was no regular train service at that time.

When the explosion occurred, Mr. Edward Graff, Foreman Miner of the Bureau Mines Station at Norton, Virginia, was at Bonnie Blue, Virginia. He was notified of the explosion about 8 P.M. and arrived at the mine about 4:30 A.M. While Bonnie Blue is about five miles across the mountains from Kenvir, it was necessary for Mr. Graff to drive, via Government truck, about fifty miles over very rough roads before he could get to the mine.

During the recovery work, Messrs. Kessler, Graff, and Miller, assisted in the explorations, and restoring ventilation. Mr. C. F. Herbert, remained on Car 4 and issued supplies.

LOCATION AND OWNERSHIP

Mine No. 30 is located at Kenvir, Harlan County, Kentucky, and is operated by the Peabody Coal Company of Chicago, Illinois. The mine is served by the Louisville and Nashville Railroad.

The officials of the Company are as follows:

President	-	Stuyvesant Peabody,	Chicago, Ill.
Vice President	-	Moses Peltier,	" "
Assist. Vice Pres.	-	George McFadden,	" "
" " "	-	David Devonald,	" "
Div. Superintendent	-	E. B. Childers,	Kenvir, Ky.
Mine Manager	-	Easton Sexton,	" "

SURFACE OPENINGS

What is termed Mine No. 30 is really two separate sections, or mines, with a single tippie for the two mines. One section lies in the mountain, south, and the other in the mountain, north of the railroad. The coal seam is about 500 feet above the base of the mountains and is reached by two drifts at each mine. One drift serving as an air course, and the other as a haulageway. About 700 men work in and around both sections, and produce about 3300 tons per day. The coal is dumped into a bin at each mine and then carried down the mountain side to the tippie by means of a retarding conveyor of the rope and disc type.

The explosion occurred in the section south of the railroad in which about 315 men work on the day and 75 on the night shift. The daily output of this section is about 2400 tons. The following descriptive matter deals with the section in which the explosion occurred.

COAL BED

The mine is working the #5 seam of the Kentucky series. At this point it averages about 40 inches in thickness.

METHOD OF WORKING

The coal seam is worked on a panel system. Main entries are driven 2000 feet apart and room entries 420. All entries are driven 12 feet wide with 36 foot pillars between. The barrier pillars are 150 feet wide. Some of the entry and room pillar coal is extracted. All of the coal is undercut before it is shot.

Analysis of face samples of coal will be found in the appendix.

GAS AND VENTILATION

The mine is ventilated by a 5' x 3' motor driven Jeffrey fan which

is operated blowing. It is so constructed as to be reversible. The fan is running at 160 R.P.M. and is producing about 55000 cubic feet of air per minute. Stoppings are constructed of wood, slate and canvas. Canvas and wooden doors are used for deflecting the air currents. There are two main splits. The mine is considered as being non-gaseous by the State Department of Mines. It is not examined before the day or night shifts report for work.

Tabulated results of the air analyses will be found in the appendix of this report.

HAULAGE

Mechanical haulage is used throughout the mine. Three trolley locomotives are used for main line haulage and 13 storage battery locomotives are used for gathering the coal at the face.

Forty pound rails are used on the entries and twenty pound in the rooms. The track gauge is 48 inches. The cars are constructed of wood, of the tight end type and have a capacity of about 2000 lbs. The main haulage is on the return air.

LIGHTING

All underground employees use open carbide lights. The main haulageways are lighted with electricity.

UNDERGROUND MACHINERY

The underground machinery consists of four electric pumps, two motor generator sets, fourteen cutting machines and sixteen electric locomotives. All underground electrical equipment is of the unapproved type and is operated on 250 volt D.C. current. The trolley wires are very

well hung but are unguarded at crossings. It was also observed at one place in the 15 Left Main that the uninsulated machine wire was placed along the roof and in the center of the roadway.

EXPLOSIVES

Permissible explosives, Hercules Red H.L.F. Brand, No. 6 detonators and fuse are used for blasting coal. The size of the stick is $1\frac{1}{8}$ " x 6". Hercules 40% dynamite is used for blasting rock and slate. The miners carry their supply of explosives into their working places. The writers were informed that some of them have been riding the man trips with their supply of explosives. It was observed that some of the miners were issued a full box of explosives and detonators. This is entirely too much explosives for a miner to have in his place at one time. It was also observed that some of the miners kept their detonators on the box of explosives. This is a dangerous practice that should be discontinued.

The miners drill, charge, tamp, and fire their own shots. Fire coal is used for stemming. The shooting is done at any time during the working shift. The writers were informed that some of the miners, after charging their shot holes, use a short fuse on the primer stick. They then light the fuse and place the primer stick and one dummy in the shot hole and run to a place of safety. This also is a very dangerous practice which should be prohibited.

DRAINAGE AND DUST

The accumulations of water in mine No. 30 are not very large. With the exception of a few dip workings, all sections of the mine visited by the writers were comparatively dry. Four small electric pumps are required to keep the water pumped out.

There was considerable coal dust in the sections visited during

the inspection. Very little inert material becomes mixed with the roadway accumulations after entries are brushed. The dust on the cross entries seems to contain very little incombustible matter. According to the last report of Mine No. 30, made by the State Mine Inspector, there was considerable fine dry coal dust on the entries where the explosion was the most violent.

MINE CONDITIONS PRIOR TO EXPLOSION

From the information obtained, the fan had been in continuous operation during the day, and other conditions in and around the mine were apparently normal.

PROPERTY DAMAGE

While the explosion affected only a portion of the mine, it was somewhat violent and covered considerable area. Four trap doors, one overcast, and about sixty stoppings were blown out. Many timbers were blown out which permitted considerable slate to fall.

Friday, May 25, the management started to remove the debris and rebuild permanent stoppings and on May 30, with the exception of the 9th Right Main section, the mine was again in operation.

FORCES

The writers are of the opinion that the explosion originated on the 3rd Right Main entry, about 600 feet inby the Main entry, and traveled in and outby this point. Inby the 3rd, Left 3rd right entry there was a diminution of forces. The force dying out at a point midway between the 5th and 7th Left entries.

At the mouth of the 3 Right Main entry there was a division of forces. The force traveling inby and outby along the main entry. The fan

drift and housing were partially destroyed at the drift mouth. As the explosion traveled inby along the main entry it seemed to build up to some extent. Thirty-three empty cars, which were standing on a side track opposite the 7th Left Main entry, were badly wrecked. Part of the force went in the 7th Left and then in the motor barn, which is turned off the 7 Left and partially wrecked the switch board and moved a 200 KW motor generator set about 3 inches. This set was grouted to the foundation instead of being bolted.

At the 9th Right entry the main force again divided, part going inby on the Main entry and part going in the 9th Right. As the force traveled inby on the 9th Right it seemed to increase in violence. A number of cross bars were dislodged, causing several large falls of slate. Inby the 18th Left there was a gradual diminution of forces, and there is very little, if any, evidence of force inby the intersection of the 9th Right and 17 Left 3rd Right Main.

The force continued inby on the Main entry until it reached a point about midway between the 13th and 15th Right entries, when it died out. The forces did not travel any great distance in the left or right entries inby the 9th Right.

All of the stoppings between the main entry and air course were blown out from the drift mouth to the 13th Right Main entry. The overcast at the mouth of the 3 Right Main entry was destroyed. Trap doors were blown out at the crossovers opposite the 9th, 11th, and 13th Right Main entries. An automatic door on the main entry about 200 feet inby the 13 Right was also destroyed. A trap door on the 11th Right Main was pushed through the frame but not seriously damaged.

EVIDENCE OF HEAT AND FLAME

On the 3 Right Main entry the insulation on the power cable and phone wires was badly burned. There were deposits of coked coal dust on the props set along the entry. On the main entry the insulation of the power cable and phone wires was burned. Between the 9th and 13 Right entries there was evidence of extreme heat, as some of the timbers were badly burned and there were heavy deposits of coked coal dust on many of the props along the entry.

On the 9th Right Main entry the insulation of the power cable was burned, but otherwise there is very little evidence of heat on this entry. Doubtless this was due to the violence of explosion along this entry.

The bodies that were found in the motor barn and on the 3 Right Main entry were burned.

RECOVERY WORK

The following were notified and arrived as soon as possible, after which they assisted with the recovery work: Chief and District Inspector from State Department of Mines; Mine Rescue teams from, U. S. Coal and Coke, Lynch, Kentucky; Fordson Coal Co., Kentonia, Ky.; Wise Coal and Coke Co., Dorchester, Virginia; U. S. Bureau of Mines Car #4, and the foreman of U. S. Bureau of Mines Station at Norton, Virginia.

In the meantime the management proceeded to restore ventilation by repairing the drift and housing of the fan. After this was done they then started to place temporary canvas stoppings in the affected area.

The recovery crews entered the mine by going in the main air course up to the 3rd Right Main entry. At this point, canvas stoppings were placed across the mouth of the 3 Right, in the air course inby the

