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

October 1, 1887; Bast Colliery; Ashland, Pa.; 5 Killed

(From The Colliery Engineer, October 1887, pages 66–67)

On Saturday afternoon, the 1st inst., a disastrous and entirely unexpected accident occurred in the Bast Colliery, near Ashland, Pa., that resulted in the death of five persons by suffocation; and about twenty others were more or less injured.

The Bast Colliery is opened by a slope in the south dip of the Mammoth Seam, 810 ft. long on dips varying from 29° to 52°. The present level from which coal is hoisted is the second below water level. From the foot of the slope a tunnel is driven south 810 ft. where it cut the south dip of the Mammoth Seam in the first basin south of that in which the slope lies. This tunnel cuts the Holmes Seam, next south of the slope, on the south dip. The measures on the north dip of the slope basin were worthless.

The gangways in the Mammoth Seam at the south end of this tunnel were driven east and west, and breasts worked from them, till the boundary lines were reached. The West Gangway in which the accident occurred was driven 2100 yds. from the tunnel to the boundary, or line of pillar to be left between Bast Colliery and the old workings of the Potts and Wadleigh Collieries lying just west, in the same seam. There were 100 breasts worked from the gangway, each 10 yds. wide, with 10 yd. pillars between them. The breasts were opened with double shutes, or a shute on the outside and one on the inside of the rib of the breast, which were driven up narrow for 15 yds. to the "stump," or first heading. In the pillar stump a manway was driven up to the same heading, and from each manway spout holes were driven to the air gangway which was driven in the vein, above the main gangway. These breasts were worked by the yard, and left full of cut coal till finished, the miners traveling to the face by means of jugular manways which were also the travelling courses for the air to the faces of the breasts.

The men employed all worked with safety lamps, but the amount of gas encountered was far less than in many other collieries in this neighborhood, and the amount of air passing through the level workings was fully up to the legal standard. The accident occurred between breasts 91 and 100, or along the inside 200 yds. of gangway. These breasts had all been worked up to the anticlinal axis, or saddle, a distance of about 50 yds. on the pitch, from the gangway.

After these breasts were finished the pillars between were taken out from the face down about half way to the first heading, except in the case of the pillar between breasts 99 and 100. This was not touched. After this was done, it was customary to widen the manway, in the pillar stump, to shute width, and drive up through the portion of the pillar remaining and pull it back, taking out all the coal except that in the gangway stumps or pillars.

At the time of the accident, all the pillars from breast 91 to the face had been robbed more or less, except that between 97 and 98, which was not taken out, but all preparations were made for starting it. The pillar between numbers 96 and 97 was taken out at the upper part, and the shute was driven a short distance up into the lower part of it, and three shots had been fired in it the night before the "start it," i.e. to cause the whole mass to move and run down to the shute for loading in the mine cars. The seam at this point dipping about 40°. These shots did not have the desired effect, and the men were at work in that neighborhood on the fatal day, just as usual, and as was customary in such cases.

At about 1 o'clock, the pillar started of its own accord and ran, and at the same time there was a rush of "wind," as the miners describe it, that knocked them all down, extinguished their lights, and knocked around everything portable in that portion of the gangway. This was followed by two more lighter concussions. The first blast must have been a powerful one, as it worked against the main air current and reversed it for a few minutes. The news of the disaster soon reached those on the surface and great excitement immediately prevailed. The colliery officials, assisted by the miners from other portions of the colliery immediately proceeded to effect a rescue, and succeeded in bringing to the surface twenty men who were more or less affected by gas and considerably knocked about and bruised, and the bodies of the following persons who were suffocated:

A fire boss, a starter, a driver, a laborer, and a door boy.

Some of those brought out alive were unconscious, and for a day or two there were grave doubts as to their recovery, but fortunately the death list grew no larger.

The Mine Inspector says the cause of the accident, in his opinion, was that the pillars being robbed, left a large open space that filled with gas, and the air current naturally crossing the worked out area at its lowest point and consequently by the shortest route, left the gas undisturbed. The top rock being exceptionally strong did not break at first, but when the pillar between breasts 96 and 97 ran, its weight was too great and it fell in a large mass, and forced the gas all down on the gangway, as there were no openings above through which a portion, at least, might have escaped. Or, the pillar running may have released a sufficient quantity of gas, and forced it down on the gangway, to produce the disastrous results. Fortunately the gust came with force enough to extinguish the lights, for had they not all been extinguished at once there would have most likely been an explosion far more disastrous in its results, both to life and property.