

It was contended by some witnesses that, judging by the quantity of firedamp found in bords 4, 5, and 6 even some time after the explosion, at the moment of the ignition bord No. 6 must have been so full of firedamp that it would have been impossible for Martin to enter carrying a naked light with him, and that therefore he must have come from the opposite direction to the way by the door. There is, however, no sufficient evidence that these bords contained firedamp to such an extent as to completely fill them, even at the upper ends. It would appear as if Martin passed through the door carrying a naked light in his hand, and when he had proceeded a short distance down the bord, probably as far as the cut-through to No. 5, he encountered an inflammable mixture of air and firedamp, and an explosion took place. This explosion served to disturb and put in motion the coaldust on the floor and sides of the bord, which being, as recent analysis has shown, of a most highly inflammable nature, ignited with a terrific explosion, and the liberated gases sweeping through the bords and passages of the mine with enormous velocity hurled to great distances, and in most cases destroyed, every obstacle in their path. No man within the immediate range of the explosive action escaped alive. The exact spot where Martin was standing when the explosion took place cannot be determined with certainty. It seems probable from the evidence that his body, which when found was, with the exception of the socks and boots on his feet, entirely devoid of clothing, was carried by the force of the explosion a considerable distance. His coat, which was not destroyed, was found near the third stenton from the door. The probabilities are that he was carrying his coat on his arm, and that it was the first thing torn from him by the force of the explosion. If he had been wearing it at the time, it is almost conclusively certain that it would have disappeared with the rest of his clothing.

The explosion was due beyond any reasonable doubt to the emission of firedamp from the roof of No. 5 bord in No. 5 section—known as the old workings—where there is a “fall” from the roof of several months’ standing. There is an extensive fall in No. 6 bord which was first seen after the explosion, but that, in our opinion, did not contribute the firedamp which was encountered by Martin. Its occurrence is probably due to the explosion. There is not sufficient evidence before us to enable us to say what quantity of gas was present in bords 4, 5, and 6 on the morning of the accident. All those who could have thrown light on the matter have, unfortunately, perished. It is a well-ascertained and accepted fact that a large amount of an inflammable mixture of atmospheric air and firedamp is not essential to the production of an explosion; but there is no doubt in this instance that the firedamp must have been escaping in considerable quantities to have impregnated the air to an inflammable extent (5·6 per cent.) at the distance from its source at which Martin met it. If Martin entered by the door, as we think is certain, and was carrying a naked light in his hand, it would have been extinguished by the current of air caused by the opening of the door. There is almost a certainty that his light was put out and that he probably relit it at the spot where the explosion originated. In all probability the upper air of No. 6 bord was impregnated with gas to a dangerous extent. Martin entering the door carrying the lamp in his hand would not bring the naked light into contact with this inflammable mixture, but if he had occasion to raise it for any purpose—such as to fix it to his head before entering on his work—an explosion would inevitably follow.

It is possible, as suggested, though not probable, that the exudation of gas had not long commenced in No. 5, and had reached No. 6 just when Martin arrived there. Be that as it may, we are perfectly satisfied that if a proper inspection of the old workings had been made with a safety-lamp prior to these men entering through the door the presence of firedamp in the air must certainly have been discovered, and in that case, without doubt, steps would have been taken to render the air pure, and the calamity which we now deplore would have been averted.

From the evidence it appears to us certain that Martin was the first to enter through the door. Deputy Smith, the official in authority, and the only man, apparently, of that party who was in the habit of carrying a safety-lamp, seems to have been very much in the rear, judging from the position in which the body was found. The door should not have been open for Martin to pass through until Deputy Smith, or some one authorized for the purpose, had previously entered with his safety-lamp and examined the place to ascertain its safety or otherwise.