

fair amounts of illuminating gas. The average composition is about—

Moisture	1.46
Volatile combustible matter	33.69
Fixed carbon	59.35
Ash	5.50

In conclusion, I may say that the mines here are as a rule carefully worked,—that individual or insignificant ignitions of gas are rare: that the amounts of gas now visible in the mines are quite small in comparison with the amounts allowed twenty years ago: that during this period great improvements have been made in the amounts of air circulating, and that it may be the increase in the velocity of the air currents and the larger amounts of air now mixed with the gas, and the greater movement of dust, combine to render explosions more violent in Nova Scotia than they were thirty years ago, when large bodies of gas were common in the mines, but existing as diluted greatly with deoxidised air and the products of combustion and breathing.

When the number of shots fired in mines dusty and yielding gas is considered, and the variety of explosions or ignitions of dust or gas is remembered, in connection with the frequent malignity of explosions when they do occur, it may be permitted to speculate if there may not exist certain conditions (applying to gases) rendering the inception and propagation of explosions more ready at one time than another. To the uninformed mind it certainly appears that in our dusty and gassy mines there should be more frequent explosions when the number of shots fired is considered.

If any means could be assigned for an increased readiness for dust particles or gas to ignite at one time more than another, ground might be given for experiment. When the existence in mines is noted of tracts of dry and dusty workings, alternating with others dampened with moisture, it may not be impossible for electrically induced conditions to be set up in a dry district, as influenced by the neighborhood of a damp and better conducting tract, that may at times present unusually favorable