

102. That is a natural corollary?—Yes.

103. Can you tell me whether any flame-producing explosives were used in Taupiri?—There is nothing else used in New Zealand. There is not an explosive which is on the English permitted list used in any mine in New Zealand at present, but there is going to be, I hope.

104. Is a permitted explosive one which gives no flame, or the merest amount of flame?—It is a “permitted” explosive when it has passed the British Home Office test, and will explode without producing flame in an inflammable mixture of gas and air or coaldust. They have a Board at Home which tests these explosives.

105. You say they are all flame-producing explosives which are used in New Zealand mines?—Yes, because the law does not give us direct authority to insist upon flameless or permitted explosives only being used.

106. Do you consider this mine a dusty mine?—I do not consider the quantity of the dust dangerous, but I think it is a dangerously dusty mine.

107. You mean that the quality of the dust—the inflammable nature of it—makes it a dangerous mine?—Yes, tremendously so.

108. Have you got an analysis of the dust made by Dr. Maclaurin?—This is the original certificate and report of the Dominion Analyst. I will read that part of the report which shows the inflammability of this dust. I will put the whole report in. [Report put in—Exhibit CC.]

109. How many samples were sent to Dr. Maclaurin?—There was one sample of coal and four of dust, one of brattice and about thirteen of gas, taken by me. These included three samples of dust from the mine, and a large piece of coal which Dr. Maclaurin converted into dust. Professor Dixon did not state it was a piece of my sample which was analysed. He went to the Dominion Analyst and obtained one of my samples, and reported the result without any acknowledgment that it was my sample he had tested.

110. Was the sample which Professor Dixon produced here in a bottle the sample that you had taken from the mine and given to Dr. Maclaurin?—Yes, that is so.

111. Where did you get those samples which you sent to Dr. Maclaurin for analysis—in what particular place?—I put the localities down as I collected the samples. Sample No. 13 was dust from bord in No. 5 district near where the W.C. pan was. Sample No. 13 was the one which was taken when Mr. W. Wood and Mr. B. Bennie were present. It was taken from the first bord on the left-hand side going up the jig. Sample No. 14 was taken when Mr. Bennie was present; it was dust from near No. 6 cabin on the haulage roadway. No. 15 was dust taken from the main haulage roadway at No. 4 level. No. 16 was a piece of coal from Ralph’s Mine. No. 17 was a piece of charred brattice from near the flat-sheet, No. 5 jig.

112. Now, did the result of those analyses show that the dust was extraordinarily highly inflammable?—Yes, very much higher than anything else Dr. Maclaurin had tested here. The flame from Ralph’s coal-dust projected the longest distance, and he tested for comparison Westport–Stockton bituminous coal, Aberdare bituminous coal, New South Wales coal, and Welsh anthracite. The Huntly sample gave a flame which ignited cotton-wool at a distance of 20 in.; Westport–Stockton, 16 in.; Aberdare, 13 in.; while in the Welsh anthracite was only 2½ in. The Doctor states in his summary that “These results show that the Huntly coaldust is very inflammable, and that the flame of the ignited dust travels greater distances than ordinary bituminous coals such as Westport–Stockton and Aberdare. Such properties would render the coaldust very affective in carrying on and intensifying an explosion once started.” I may say that I tested it before. I tested roughly after the disaster with Mr. Alison, a director of this company. I was astonished at the result. It went off like gunpowder. That was on the 17th. I expected to find it similar to ordinary coaldust, and did not know that it was so inflammable.

113. I ask you whether the manager has the right at any time to send such samples to the Government Analyst for testing purposes in order to find whether or not his coaldust is inflammable—can Mr. Fletcher, or Mr. Alison, or anybody else send a sample and have a test made?—Yes, anybody in New Zealand can send a sample of anything to the Dominion Analyst for examination. His Department analyse samples for the public.

114. Therefore there is no difficulty in the way of any manager of any mine getting his coaldust analysed?—I do not wish to suggest anything against the management in this connection.

115. In regard to the mine-air, part of which was taken in the vicinity of No. 5 jig, Ralph’s Colliery, was that analysed?—Yes, I took eleven samples the week after the disaster from different parts of the mine, and they were analysed. Mr. Wood was with me when I collected them.

116. By whom were they analysed?—By Dr. Maclaurin. They were taken on Friday, the 18th September, six days after the explosion.

117. Will you tell me as nearly as possible where you took those samples of mine-air?—I can show you on the plan, as could also Mr. Wood.

118. Were any samples taken in the region where Martin’s body was found?—No, we had to go down to a lower part of that district by about 30 ft.—the upper part of the No. 5 district was full of gas. I measured 350,000 cubic feet of explosive gaseous mixture. At my request Mr. Wood took me on the Friday morning to where firedamp had been found by Deputy Mills, who had marked the places in chalk. When we found gas in such great quantities it was considered only safe for us to have one oil safety-lamp; in addition I carried an electric safety-lamp. The highest point in the district was at that door which was blown outwards. That is on an anticline or crown which rises in all directions towards the door [places from which air-samples were taken indicated on plan by witness]. We ascended from the bottom of the bords as far as we could go towards the faces. We always obtained a distinct gas cap on the floor. We did not raise the lamp any higher because of danger. Mr. Wood withdrew his oil safety-lamp, and I went into the gaseous mixture with my electric safety-lamp. I