

posing to make trial-borings from the surface in the direction of Kamo. At my visit of inspection on the 21st January last I found that the air of a portion of the travelling-road was very much heated from the decomposition of the lime in the roof and sides of travelling-roads and bords; the working-faces were, however, much cooler. The manager is about to construct another and shorter road, which will avoid the necessity of going through this overheated place.

3. *Kamo Colliery*.—From my last year's report it will be seen that on the 19th February, 1887, I took action and obtained judgment against the manager for not providing sufficient ventilation, safety-cages, &c., as required by the Act, and which were absolutely necessary for the safety of the men. The company were, however, unable to raise the necessary funds, and in consequence the mine was closed, by the directors' instructions, on the 18th April, 1887; the pumps, however, have since been kept going to keep the mine drained. Since that date the only work done has been on a small block of coal that was left at the surface-level, where from two to four men have since been partially employed. On my visit of inspection in January last, I found that the manager, Mr. Geary, had, in working from this block, broken into the old workings. As these had fired, or had been smouldering, opening into them only increased the flame through the supply of fresh air, which not only endangered the men, but also the whole property, I therefore instructed that these openings, as well as the air-shaft, be at once closed up, so as to be thoroughly air-tight; and before leaving the district I saw that this was all done. It is to be regretted that from the present state of the money-market this company has not been able to raise the necessary fresh capital to sink a new shaft, and recommence operations in an easterly direction, or further towards the dip, there being every encouragement to do so, as both seams are thickening in that direction. In the dip at the present shaft the seam, which at the surface-level is only 4ft. thick, has enlarged to nearly 9ft., and the 10ft. seam at the surface-level is about 14ft. at the shaft; and there is also every indication that the thickening of these seams still continues further towards the dip, giving every encouragement that further operations will be successful, provided that borings are first made, and full particulars of the strata obtained, in order to ascertain the best position on which to sink the permanent shaft. The omission of those preliminary measures was a great mistake in the first instance. These borings should not be very expensive to make.

WAIKATO DISTRICT.

4. *Taupiri Colliery*.—The output from this mine for the year ending the 31st December, 1887, was 29,601 tons. About one-half of this output was obtained during the first part of the year from the far dip-workings, or No. 5 District, and also from the pillars in Nos. 1 and 3 Districts. Since then the output has been principally from the bords and headings under the swamp in No. 5 District. In this district a new shaft, 92ft. deep, was completed about the end of February, and is now used for pumping and ventilating purposes, this being the sixth ventilating-shaft in the mine. In the early part of May a portion of the old workings in No. 3 District, where the roof had partly caved in, was observed to be heating. This kept increasing, and began throwing off strong smoke and gases. It therefore became necessary that this portion of the mine should be entirely separated, and the fire extinguished by cutting off all the air-supply. This was effected by the manager, Mr. Collins, having ten substantial sand-stoppings built, and the air thoroughly excluded. This portion of the mine has not been opened since, but it now has every appearance of being quite cool, and the fire extinguished. A trial heading, 7ft. wide by 6ft. high, was driven in a north-westerly direction to prove the thickness and quality of coal in that locality. On the 13th December the roof near the face of this heading suddenly caved in, apparently from a great pressure of water overhead, and a large volume of water poured in, washing the slack and tramway-ballast into the sump. The pumping-engines had to be kept going at full speed, night and day, for four days before the water was got under; since which one pump has been able to keep this water down. From the steadiness with which the water continues to flow, it would appear as if it came from an underground channel, it having no appearance of either coming from the swamp overhead or the Waikato River. A curious instance of the coal taking fire from the effects of a shot occurred in this mine on the 9th January of the present year, in a bord close to No. 6, or the new shaft. It is usual for the men to fire as they are knocking-off work at 4 p.m. About 10 p.m. the engine-driver, R. Batten, reported to the manager that the mine must be on fire, as heavy smoke was coming up No. 6 shaft. The manager as quickly as possible got three men, viz., R. Ralph (son of the lady from whom the company lease the property), E. Connor, and R. Robson, to go with him to the place. These, the manager states, deserve the highest credit for the way they faced the danger with him; indeed it was with the greatest difficulty, and only by crawling on their hands and knees, with their mouths close to the ground, that they reached the place. The blaze was by that time up to the roof, or 12ft. high, but they worked with a will, and ultimately got the fire under. The men that charged the hole admit to stuffing brown paper over the powder, and, though they will not acknowledge it, I have no doubt in my own mind they must also have tamped it with coal-dust or slack, a thing not allowed under any consideration. It is to acts such as this of disobedience or gross carelessness on the part of the men themselves, that all the accidents are traceable which have taken place in my districts since I became Inspector of Coal-mines in 1879.

5. *Waikato Mine*.—The output during the year 1887 has all been taken from the pillars, and every care and attention appear to have been given by the manager, Mr. E. B. Taylor, to prevent accidents. I mentioned in my last year's report that, as the coal was found to dip under the tunnel-level, it would be necessary either to erect steam pumping and hauling machinery in the mine or open out, away on the flat, slightly above the Waikato River level, what will be practically a new mine. The latter plan has wisely been adopted, and the works for obtaining coal from this level are now approaching completion. A wharf 64ft. long by 12ft. wide has been erected on the western bank of the Waikato River, from which a tramway to the tunnel-entrance is now nearly completed. The length of this tramway is half a mile; the rails being steel, 16lb. to the