

There is no increase in the number of mines opened during the present year. Evidences of coal existing in other quarters than those already opened out have been shown to me, but people prefer not to disclose the exact locality until mining rights have been secured.

*Kawakawa Mine.*—The drainage of this mine is now effected through the new shaft. The whole of the pumping machinery has been erected here. Two 12-inch lifts are at present sufficient to raise all the water, but a 24-inch cylinder "Tangye" pump is also being fixed in the shaft, as a stand-by in case of any sudden increase of water. The mine is now exceedingly well ventilated. The whole of the old, or No. 2, pumping shaft, 150 feet in depth, has been bricked up to the surface, and a fire is kept constantly burning in the furnace at the bottom. A current of air is thus kept in circulation through the workings, and is so strong, that a lighted lamp can with difficulty be carried along some of the main levels, and the air at all the headings and bords is very good. The machinery for pumping, hauling, &c., under the immediate charge of Mr. Coutts, engineer, is now in first class order, and every precaution seems to be taken by the manager, Mr. Moody, both under and above ground, to prevent accidents. In addition to the ordinary working of the mine, there have been different works carried on with a view to its future further development, on which at present it is not necessary to make any special comment. The output from this mine has increased from 42,383 tons in 1879 to 54,865 tons in 1880.

*Kamo Mine, Whangarei.*—This mine has now been placed under the management of Mr. George Black, late manager of the United Pumping Association works, Thames, and formerly of the Union Beach Mine, Coromandel. A new seam of coal has been discovered in this mine, lying 30 feet overhead the present one. There has always been a rumour that this was the case, but nothing was definitely known by the present owners. To settle the point, Mr. Black bored upwards, and found the seam at this place 4 feet 6 inches thick. A drive has now been put in, which struck the seam more on the dip than where the bore-hole was made. The seam here was 4 feet thick, showing that towards the rise it is increasing in thickness. The coal in this seam is of the same nature (brown) as that of the lower seam. I have not heard that any actual tests have yet been made, but Mr. Black is of opinion it is even superior in quality to the lower seam. In regard to the workings in the lower seam the ventilation was much improved from what it was on my former visit, the air course having been extended to near the end of the main level, directing the air to the furthestmost working. The current is, however, not very strong, which is to be accounted for by having to split the air through so many bords in order to keep the whole of the mine cool, the immense amount of slack lying in the unused bords apparently having a tendency to render the mine very hot. A general overhaul seems to have been given to the mine on recommencing work when the Kamo-Whangarei Railway opened, and it is now in very fair working order. Surveys have been recently made, and the workings brought up to date on the plan. Preparations are being made for boring with the Government diamond drill, as the rock is exceedingly hard. A good trial of the qualities of the drill may be expected.

*Whau Whau Mine, Whangarei.*—In regard to the proposed opening into the old workings, mentioned in my interim report of 20th October, 1880, the boring was kept well ahead of the drive, which, on striking through into the old workings, relieved them from the water. This now seems to drain all the water from that direction, rendering that part of the mine dry and comfortable to work in. As, however, it was found the old workings had caved in in this quarter, and that communication could not be had, it was wisely considered not advisable to break through for ventilation. For this purpose a cross-drive is now being carried out, which will strike the old workings nearer the outlet, where they are open. In the headings where the men are now working, the air, though sluggish, is cool and of fair quality, not seemingly much affected on its course through other portions of the mine.

*Taupiri Mine, Huntly.*—Work is now being carried on both in the old and new mines. Arrangements having been come to with the proprietors of the land in regard to drawing the pillars in the old mine, this is being gradually and successfully done, and the greatest care seems to be taken by the management to prevent accidents. In regard to the new mine, before regular operations were commenced a shaft was sunk, and communication made with the bottom of the hauling incline. This shaft serves for pumping as well as an upcast for ventilating the mine. A ladder has been fixed in the shaft, but without the usual stages at intervals. As this ladder is never to be used by the men except in case of emergency, these I do not consider necessary. A "Tangye" pump has been fixed at the bottom of the shaft, the steam for which is conveyed down the incline, the exhaust being up the shaft. The steam-pipe down the incline (which acts as a downcast), not being all jacketed, causes the incline to be nearly as hot as the upcast shaft. This prevents the ventilation from being as good as it otherwise would be; but for the present it is sufficient, as the workings are not yet very extensive. I pointed out to the manager that the practice of blasting at all times in the mine made the air very bad and hurtful for the men employed, as the smoke is driven through the various workings before escaping by the upcast, and suggested that the firing be allowed only to take place when the men are knocking off, so giving time for the mine to clear before the next shift start work. The manager agreed with the suggestion, and promised that in future it should be carried out, as it would tend to the comfort and health of the miners, as well as enable them to do more work.

*Waikato Mine, Huntly.*—This mine is in good working order and well ventilated, there being four openings to the surface. The mine is very disadvantageously situated for getting coal to market, lying as it does on the opposite side of the Waikato River from the Auckland railway line; at present the coal is tipped into barges, which are towed up the river to a convenient point, and there loaded into the railway wagons. This arrangement is unsatisfactory as well as costly. The coal having too much handling is very much broken up and deteriorated in value by its having to be tipped from a height of 30 feet into the barges. As pointed out in my last year's report, from the extent of coal a bridge across the river would amply repay itself, but other modes might be adopted which would be a great improvement on the present system, either to bring the railway wagons across to the mine on barges, or the mine trucks over to the railway.

*Bridgewater Mine, Miranda.*—I visited this mine in the beginning of November, and found the owner had got a new plan prepared, but it turned out not to be worth the paper it was drawn on.