

the Cassel Company hold, it is to receive one-fifth of any additional capital beyond the first 77,729 shares—*i.e.*, if 100,000 shares were issued and fully paid up, the Cassel Company would get one-fifth the value of £22,271, or £4,454 4s. The Crown Company is to have the right to use the cyanide process, and the exclusive right to grant licenses for the working of the said process within a radius of three miles from the Karangahake Trig. Station. At the present time the Crown Company pays a rental of £300 for the use of its plant; but, in the agreement referred to, the Crown Company is given the right to purchase the plant on satisfactory terms.

The mine when first opened up from the creek-level gave very promising returns; and it was expected that, having about 700ft. of backs, payable ore would be found from the creek or No. 6 level, where the richest ore was found, to the surface. This level is in a considerable distance, and payable ore got all the way; but the shoot of ore does not seem to go up in the stopes to a great height. Numerous breaks and heaves have been met with, but the lode has always been picked up again. When No. 6 level was constructed for something like 900ft. in a south-westerly direction the lode was found to have heaved a considerable distance to the eastward, some 102ft., and on following it again for 70ft. another heave was met with, which threw it 40ft. to the westward. A winze has been sunk for 60ft. from the No. 6 level, and rich ore met with all the way down, the lode being about 6ft. in width. A level has been driven from this winze, and stoping is now going on. This mode of working was necessitated in order to furnish a supply of ore to keep the mill constantly at work.

Arrangements were completed at the time of my visit to sink a shaft about 450ft. to the westward of the lode on the north bank of the Waitawheta Creek, where a large amount of rock-cutting will be required before sinking is commenced, in order to have room around the shaft. It is proposed to sink the shaft to a depth, in the first instance, of 230ft., and open out at 200ft., thus leaving 30ft. for a well. Taking the dip of the lode, which is westward, the 200ft. level will give about 250ft. of backs.

During the year ending the 31st March last, 4,084 tons of stone has been crushed, which yielded 9,926oz. 16dwt. gold, while an average of ninety-five men have been employed in the mine. This shows that there is rich ore in this mine; but, from what has transpired recently, there is grave doubt if anything like a fair percentage of the gold is saved. A sluicing claim was taken up by Mr. Gordon for working the waste tailings which had been subjected to the cyanide process, and the returns that he got were quite surprising, showing that a large quantity of gold has been lost, notwithstanding the treatment with a cyanide solution. Mr. Napier, the metallurgist for the company, is said to have accounted for the quantity of gold got by Mr. Gordon through it being in the tailings from the ore crushed for the Talisman Company, and not from the Crown ore. How this is ascertained is a problem not easily solved; if screens of the same mesh were used when crushing the ore from the Talisman Mine as were used for crushing that from the Crown Mine, the fineness of the particles of gold coming through the screens would be practically the same in both instances. However, the plea set up is that the gold in the Talisman ore was too coarse to treat by cyanide. The tailings being lodged on the edge of the river, the water would naturally carry off the lightest particles first, leaving the denser material behind, and consequently it is said that Mr. Gordon succeeded in obtaining the concentrates of the Talisman Company's tailings.

In regard to the discovery of gold in the tailings from the Crown battery, the manager of the Talisman (Mr. Adams) throws a new light on the subject. He states that the tailings had to pass through a tail-race filled with loose stones, and that, when the crushing of the Talisman ore was completed, the Crown people would not allow him to clean it out, although he offered £50 for the right to do so, and also £5 per week for the right to work the Crown Company's tailings. This shows that the percentage of saving is not what it should be, and that in the case of public crushings each party owning ores should have them carefully sampled and assayed in order to ascertain what percentage of the gold or bullion is extracted. If the gold referred to came from the Talisman ore, as suggested by the Crown Company's officers, then they should have had no hesitation in allowing Mr. Adams to get whatever gold there was in the tailings; and, if it belonged to the Crown Company, the tail-race should have been cleaned up before commencing to crush for the public.

*Woodstock Mine.*—This mine has always been a valuable one, although part of the ground was originally held by the Maria Company, who gave it up as being worthless. For some years past it has been a steady bullion producer. Some of the ore from this mine was sold, and sent out of the country for treatment, while some was treated at the small battery belonging to the Woodstock Company; but all the mechanical appliances in connection with that battery were incapable of saving 50 per cent. of the value of the bullion in the ore. The returns from the working of this mine have been sufficient to pay for opening it up and prospecting, but have not been sufficient to pay dividends.

The mine is, however, well opened up. About 420ft. of driving on the lode has been done on the No. 3 level, which is known as the Welcome Reef, being only one of three parallel lodes in the mine. The Welcome lode varies from 3ft. to 10ft. in thickness; and the manager, Mr. McCombie, informed me that the ore averages about £4 per ton in value. A leading stope has been carried on for a distance of nearly 300ft., and, again, one stope above this for a distance of about 120ft., and in the whole of the workings there is a good percentage of gold and silver in the lode. The No. 2 level is connected with a winze from No. 3, which is 149ft. in depth, and the whole of the lode is intact with the exception of the two stopes referred to, and it is also intact between No. 1 and No. 2 levels. The most promising feature in this mine is that the ore is increasing in value as it goes down. In the No. 3 level it is said to be worth £2 more per ton than in No. 2. A cross-cut is in progress from No. 3 level to intersect the lode known as Shepherd's, under the place from which ore was taken realising £40 per ton. By continuing the same cross-cut it will intersect what is known as the Big Reef, varying from 8ft. to 20ft. in width, from which a