

render the diggings far more permanent by indefinitely postponing the blocking up of the outlet, and thus to maintain one of the most productive gold fields in the province, in at least its present prosperity, for many years to come. If something of the kind be not soon done, it is to be feared that the mining population will, as the claims now held get worked out, take their departure probably to other provinces if not to other colonies."

The question of cost and management is dealt with in the same report, and with regard to the latter, I think Mr. Robinson's suggestion well worthy of consideration, he says (in clause 8) :—" I would therefore most earnestly recommend that if found by the Engineer's report to be practicable, the flushing water race be constructed by the Government with the least possible delay. I am unable to give any reliable estimate of the probable cost, so much would depend upon the amount of tunnelling, and the hardness of the ground to be gone through; but assuming the length of the race to be 15 miles and the cost per mile to be even £200, the work could be done for £3000, which would be cheap considering the advantage to the mining interest.

" But I would propose that this work should be done in connection with the ' main channel,' and with it, placed in the hands of a local trust empowered to levy rates (on a system similar to the main tail race plan as applied at St. Bathans). If that were done the trust would derive an income from persons taking advantage of the channel and flushing water, and the Government would not only be at no expense for maintenance but would probable in course of time be recouped for great part of its outlay."

I may remark upon this that the St. Bathans trust, referred to in the report, has no legal *status*, but exists and performs its functions solely by agreement with the persons who avail themselves of the channel. I do not think there would be any practical difficulty in constituting a similar trust at Mount Ida, possibly without the delay and trouble of an appeal to Parliament. Summarising the above matter, I would desire to express my opinion :

- 1st. That it is desirable that the construction of a main sludge channel at Hogburn, in the Mount Ida district, and of a head race from the lower Kyeburn River to the Hogburn, for general and flushing purposes, should be undertaken by the Government.
- 2nd. That such works are practicable, and could probably be executed for less than £10,000.
- 3rd. That the question of management after construction may be disposed of without insuperable difficulty.

I would further refer the Hon. the Resident Minister to the papers appended hereto, especially reports by Mr. Warden Robinson marked A and B, report by Mr. Warden Pyke upon the accumulation of tailings in the Hogburn, Mount Ida district, report by Mr Barr, C.E., upon proposed main channel at Hogburn, Mount Ida, and a sketch of the Mount Ida district, marked ⊕

C. E. HAUGHTON.

February 28, 1872.

Enclosures.

Mr. Warden ROBINSON'S Report (A) upon a Water Supply at the Mount Ida District.

SIR,—

Dunedin, 10th February, 1872.

I have the honor to acknowledge receipt of your Memo, of 5th instant, requesting me to advise upon the subject of water supply for my district, more especially as to the point whether the exceptional circumstances of the district would render the taking advantage of the published regulations with regard to subsidies impracticable or highly inconvenient.

2. In replying to this Memo., I must ask your indulgence if I repeat, in writing, some of the statements and arguments which I have already had the honor to bring under your notice in the personal interview with which you have favored me.

On looking over the regulations referred to, I see that they are framed in contemplation merely of the lending of money to companies requiring advances. But there are some circumstances in connection with the district under my charge which would, I think, warrant the Government in incurring some expense in ways not provided for by the regulations.

At the more recently opened Marewhenua diggings there are several enterprises which may need some help to bring them to completion, and for these the regulations will, I think, sufficiently provide. But at the Hogburn, as in almost all the older mining districts, nearly all the water that can be expected to be brought in by private enterprise has been taken up for races already constructed. The few possible sources of supply that remain are so remote, or difficult of access, that it is highly improbable that anything will be done with them unless the Government make the first move.

3. Confining my remarks for the present to the Hogburn District, I may mention that there are three possible sources of additional supply, viz., the water sheds of the Mount Ida Range, the Kakanui Range, and the Hawkden Range.

With regard to the first, it is from the water shed of the Mount Ida Range that the supplies of water for the Hogburn diggings are drawn, and it may be taken as a fact that the races at present bring in almost all the water that can in the ordinary way be got on such levels as to recommend the workings. But it would be possible, in my opinion, to bring in a race from the Little Kyeburn, to start at a lower level than any of the races referred to, which, by fluming across some gullies and travelling through one or two spurs, would save distance, and therefore economise fall, and thus probably deliver water at such a height as to be available for sluicing. On the accompanying tracing I have indicated the line of such a race approximately thus ————. A race made on this line would pick up the water of the creeks at a lower level than the present races, and would thus, without interfering with their supplies, intercept all water that in times of plenty would pass the heads of those races, as well as the constant quantity accruing to the creeks in the interval. This constant quantity