

FURTHER PAPERS RELATING TO

Mr. J. GIBBONS to the Hon. J. D. ORMOND.

SIR,— Una Q.C. and G.M. Co., Registered,
Karaka Creek, Shortland, February, 7th, 1872.
I have the honor to acknowledge receipt of your circular of 24th ultimo in reference to water supply for the Thames Gold Fields, and beg to submit the following replies to the questions therein contained.

I have, &c.,
JOHN GIBBONS,
Managing Director, Una Q.C. and G.M. Co., Registered.

The Hon. J. D. Ormond.

1. Steam engine 20 horse-power, and water wheel 10 horse-power, the latter used only in winter, when it is then used or worked in connection with the steam engine; drives 26 stamps and 3 Berdans.
2. For ripple tables and engine, about 1 sluice head, cost, £1 (the Government license).
3. The low level would be sufficient; 4 sluice heads would supply power and all other requirements.
4. Yes, if there were not too many mills above, to make the water unfit for the tables.
5. £10 per stamper per annum.
6. Karaka Creek. Good. Sufficient for all purposes except motive power; available for that purpose about six months out of the twelve.
7. We have a sufficient supply; but the yield from many batteries, especially those low down the creeks, would be considerably increased by a supply of pure water.
8. With water power at a cheap rate, yes. We could get 150 tons per week of stone barely payable with steam power, situate on Karaka Hill.
9. Nine dwt.; with water power, 8 dwt. Note.—The Una ground is generally hard, with moderate thickness of reef.
10. I believe the number of miners would be increased, as ore or stone of less value would pay with water power. I am not prepared to say to what extent, but think the difference would be something very considerable. I am also of opinion that large powerful mills, even if driven by steam, on or near the beach, with improved communication with the mines, could crush as cheap or cheaper than the necessarily smaller ones up the creeks, driven by water. A further advantage and economy of power would be gained by the whole pressure being applied to the lower mills, as well as an additional one of having a large supply of pure water available for sanitary and domestic purposes.
11. It can be used again, but not with the same advantage as pure water. Water used in a series of mills that would utilize the falls from the high level, would be useless for the ripple tables after passing through two or three mills. It would be unfit for turbine water wheels, in consequence of the tailings and grit.

JOHN GIBBONS.

Mr. J. GIBBONS to the Hon. J. D. ORMOND.

SIR,— Shortland, Thames, 7th February, 1872.
The earnestness which you evince in seeking information to guide you in the matter of the Thames water supply, the great importance of the undertaking to this field and Province, as well as a large personal interest in its success, is my excuse for troubling you with my views on the matter, further than answering the queries contained in your circular, otherwise I would not have had the presumption to obtrude my ideas on your notice.

Water power is far preferable to steam power, all other things being equal.

Water power may be as cheap as steam, even at two or three times the first cost of the latter.

Water power, if not constant and reliable, would lose a great part of its value, and would not be generally adopted in preference to steam for mining or manufacturing purposes.

I admit the great value of water power, but it must be from a constant and thoroughly reliable source of supply. A stoppage occasioned by damage to aqueducts, races, or dams, would cause a stoppage to most of the mining operations on the field, were water adopted as the chief source of motive power. Contracts would unavoidably be broken, and, in some cases, mines abandoned for a time, at least until steam power were again adopted, and ruin would be the result to many mining companies amongst others.

These may appear to be extreme views of the case, but to me it would appear an absolute certainty, if the high-level scheme is carried out as proposed. No one who has had anything to do with even moderate lengths of flume, or water-races, but must be aware of the constant expense of keeping them in repair, even under ordinarily favourable circumstances as regards the routes they traverse; but when it is taken into consideration that the proposed route is over the roughest country, across ravines, and along side hills, almost certain to slip as sure as a track or any erection disturbing the surface is placed upon it, subject to bush fires and falling trees, damage from winter torrents and loosened boulders, but will agree with me as to the utter fallacy of the proposal, unless he be one who goes in for a large expenditure on public works without regard to the future. I feel fully convinced that, if the high-level scheme be carried out by a long line of flume, there will not in ten years be sufficient evidence of it remaining, except the cost incurred in its erection, to serve as a warning to future engineers.

The same remarks will apply to the low level plan, if carried out in the same way, but the risks will be diminished in proportion to the square of the distances for the same size of flume. The larger flume necessarily required, and the heavier weight consequent thereon, will about equalize the risk in proportion to the length of the flumes.

I do not wish to overthrow hopes built upon the plans and proposals of the projectors, but merely to point out the errors of them as they appear to me, based upon a long practical experience of water