

Tuapeka and Waipori Streams, and the tract of country extending from Glenore towards Table Hill and Waitahuna, are localities indicated by all the witnesses as being capable of furnishing profitable fields of labor to the miner, if provided with water.

Even in those localities where private enterprise has already constructed races and reservoirs of considerable magnitude, the supply is yet inadequate and costly. The present supply is derived from the sources of the Tuapeka, Beaumont, Waipori, and Waitahuna Streams, which have all been diverted, at high levels, to the various existing workings. The limited capital and rude engineering of the miner has not enabled him to tap the trunks of the streams, but has confined them to the small branches, plenty of fall along the course of the race being essential to enable them to overcome engineering difficulties in an inexpensive way. An abundance of water is, therefore, left available for diversion by more skilful engineering, and the use of appliances not necessarily very expensive, but not readily at command, and requiring more mechanical and scientific knowledge than that generally possessed by those who have hitherto undertaken the construction of races and reservoirs. It will be seen from the evidence that two principal schemes have recommended themselves to the favour of most of the witnesses examined. One has already been the subject of a survey and report by an experienced Engineer, Mr. John Millar, F.S.A. The copy of his report—which is appended hereto—sufficiently shows the nature of the proposed work; but I venture, with some diffidence, to suggest that the mode proposed by Mr. Millar might not be incapable of modification in the direction of less costly and equally efficient works. The testimony of all the witnesses who possess local topographical knowledge indicates that not only can a fair supply of water be obtained, capable of being brought on to a large area of auriferous ground, but that it would not to any great extent interfere or compete with private interests. Should the Government decide upon constructing works themselves, I may mention this as one of the most important, and probably reproductive works which have been brought under my notice.

The work next in importance is the bringing water upon that large tract of auriferous land lying between Waitahuna and Glenore, and known as the Table Hill District. The evidence of the value of this land for mining seems conclusive, but no satisfactory testimony was adduced to show that there is any source of supply sufficiently ample to justify any specific recommendation. But taking into consideration the extent of proved auriferous land, and the fact that the nature of the deposit is such that without a large supply of water its riches in all probability could never be developed, and also that without an actual survey by a competent professional man, it is impossible to ascertain the practicability of the work, I would suggest that this is one of those cases of sufficient importance to justify the employment of an engineer to make a survey and report.

Other schemes of supply to various parts of the district are recommended by the witnesses. All of them are of considerable local importance, and should the Government decide upon utilising the subsidy by directly assisting private enterprise, many of these would be taken in hand, and a great impetus given to the mining of the district.

#### *Switzer's.*

I was unfortunately unable personally to visit this district, and have had, therefore, to depend for information entirely upon the evidence forwarded to me through the Warden, whose report is annexed; as well as replies to the printed series of questions, arrived at after full discussion at a select meeting of all those "whose opinions on the subject might be considered valuable." From these I am enabled to gather the following facts:—That a large quantity of payable auriferous land exists, amounting to upwards of 20,000 acres, situate on the terraces on either side of the Waikaia, for a distance of 12 miles or more. An unlimited supply of water can be obtained from the Waikaia River, the Dome Creek, the Argyle Creek, and Gow's Creek.

#### *Orepuki.*

The information at my disposal, relative to the Orepuki Gold Field, does not lead me to the conclusion that any special work for water supply commends itself at present for construction.

A public meeting was held upon the 18th of April for the purpose of obtaining the opinion of the miners upon the question: the resolution arrived at expressed a favorable opinion of the scheme generally. It appears there is in this Gold Field an auriferous area, seven miles by four, which has been proved in various places, but that only one square mile has been worked for want of water, while the present workings depend upon an intermittent supply. The sources available are the Wai Mea Mea, and another large creek to the westward with tributaries, distant ten or twelve miles probably; also the Orama, to the west, fourteen miles distant; the Rariako, Oneweia and feeders to Lake George, on the east, from five to twelve miles. The quantity of water available from these might be calculated at about thirty sluice-heads. The expense of construction of the races alone, would probably be not far short of £200 a mile.

In conclusion, I would desire to state that, in any recommendation which I may have offered as to specific details, I have steadily adhered to one principle—that in no case should any works for the supply of water be initiated, unless satisfactory evidence exists that there is a sufficient area of auriferous land available; as well as a permanent source of supply within the limits of the possible expenditure.

CHAS. E. HAUGHTON.

#### QUESTIONS RELATIVE TO WATER SUPPLY UPON GOLDFIELDS.

- I.—What is the principal character of the mining in the portion of the district in which you reside?
- II.—Is the supply of water from existing sources sufficient to meet the requirements of the miners?
- III.—Will you state whether there exists in your neighborhood payable auriferous land not commanded by the present Water Supply; and if so, give an approximate idea of the area?
- IV.—Is the water supply derived from artificial sources, in the hands of men mining their own ground, or is it, or any part of it, held as a separate property, and let to the miners, and if so, at what price per regulation head?