the necessary surveys have been made and levels taken for the tail-race. Plans and sections of same have been prepared, and at the time of my visit a few chains of excavations in the sandhills near the sea were nearly completed to the proper level, and many piles were driven by a pile-driver far out beyond high-water level. There are two rows of piles, between which the tail-box or channel is to be built and firmly bolted thereto, so as to prevent the sea washing it away. The floor of the channel will be nearly at low-tide level—too low, I fear. It is to be 13ft. wide, divided into two channels of nearly 6½ft. each, and of a depth of 4½ft. The planting will be 2in. thick, with inch lining-boards throughout; flooring-joists, 12in. by 6in.; and side straps, 4in. by 4in. The quantity of timber required to complete the work is estimated at 3,000,000ft. The channel is to have a fall of only 2in. to the chain throughout (it appears a greater fall cannot be obtained). It is intended to make all necessary preparations to save gold when the first 50 chains of channel have been constructed. Mr. Evans estimates the quantity of water to work the channel at fifty heads. I presume he intends to work only half of the channel at one time. I understood him to say that he had purchased all the water-rights on the field, which, as far as I was able to judge, after rambling over the field, would not amount to more than twenty-five heads. However, if enough money is available, I have no doubt more water can be brought in by constructing a thirty-mile race. A survey is at the present time being made in the Longwood District, with a view to finding twenty heads of water at a certain level. While the channel-work is proceeding it is intended to carry on mining operations on the claim, and tail into the flat as others are doing. Preparations for an early start were well advanced at the time of my visit. The main line of pipes, 13in. diameter, were being laid from the race to the claim. The branch pipes are 10in. diameter, and the pressure will be about 350ft. It is intended to work two jets till the channel is completed—probably two years from date. I found six men employed at the channel, four men cutting a distribution race, and five men laying pipes. The channel, when completed, will be open to the miners to tail into on a weekly payment of 3s. per man; and when the company has a plentiful supply of water, the miners will be supplied at 15s. per head of 10in. per week. This quantity of water—a Round Hill head—is equal to a quarter of a Government head.

Premier Quartz-mine (23rd April, 1892).—I inspected all the workings. The adit is in all 1,400ft. long. At 600ft. from the mouth there is a shaft 200ft. deep, at which level the reef has been followed to the west for a distance of 354ft., and from the bottom of the shaft to the east a drive has been put in 364ft. to meet an adit on the same level, which has been driven a distance of 406ft. from the surface, leaving about 300ft. to be driven to complete the low adit-level, which can be extended by a tramway in the open direct to the battery. This most necessary work has lately been stopped for some unexplained reason, therefore the stone is being hoisted up the 200ft. shaft to the top adit, and then carted down hill to the battery, as if it is intended to make the working of the mine as costly as possible. All the timber used in the mine has to be dragged by horses, or packed on their backs, up this 200ft., to be lowered down again in the working-adit. The present method of supplying the mine with a good current of air is inadequate, and could be entirely dispensed with if the low-level adit was completed. I had to call the manager's attention to the very sluggish state of the air-current in the lower workings. He at once instructed one of the men to examine the joints of the air-pipes to see if the air was getting away anywhere. The man suggested the possibility of one of the pipes being filled with water, which would account for the small supply from the pipe. I fear the air-pipes leading to the mine are a long way too small to do what is required at all times, and in all weathers, and think it will be wise to again visit the mine at an early date to see if there be any improvement. I found an open shaft uncovered at the side of the footway in the adit leading to the work, and requested the manager to cover it at once in order to prevent an accident. The average thickness of reef is from 18in. to 24in., and the average number of men employed in getting stone is twenty—sometimes three, but oftener two shifts in the twenty-four hours. The timber for the mine is a costly item, as it comes all the way from the head of the lake, a total distance of about seventy miles. The old water-wheel has been pulled down and a 6ft. Pelton fixed in its stead, which was working very nicely at the time of my visit.

Arrow Tunnel Company, Arrow River (23rd April, 1892).—At a very narrow part of the Arrow River, about four miles above Arrowtown, known as the Falls, at some remote period of time past an immense land-slip has occurred, carrying very large blocks of rock, which permanently filled up the river-bed to a great depth; and, notwithstanding all the wear by stream and *débris* during a great length of time, the gorge remains filled in above its original bed to a supposed depth of between 80ft. and 90ft. From the Falls upwards for a length of between one and two miles it is said the bed-rock of the river has never been reached by the miners, and is supposed to be as rich as other parts of the river-bed worked in the palmy days of gold-mining in the Arrow. Therefore, in order to get at this supposed rich river-bed, a tunnel tail-race of 1,000ft. in length, 9ft. wide, and 7ft. high, with a fall of 6in. to the 12ft., has lately been completed from a convenient part of the low side of fall—making due allowance for the large body of tailings to be sluiced there from fully two miles of river-bed—to a spot a little above the fall, which is supposed to be clear of the toe of the body of large blocks of rock showing in the stream. The top end of the tail-race tunnel is about 108ft. below flood-level of the river and top frame of a shaft lately sunk to the tunnel, which shaft is a remarkably strong piece of work, consisting of massive beams of squared timber, well fitted and bolted together and to the solid rock at 56ft. down from the top frame. The rock foundation slopes considerably to the east from the shaft. A second shaft, not far from the first, is now being sunk to the same level, and is down 36ft. When this is completed, and the strong iron gates fixed in position at the head of the tunnel, the head-works may be said to be ready for a start at sluicing-operations on a large scale, as it must be clearly understood that very soon after a start is made the whole of the Arrow River must continue to flow through the tunnel till shut off by the gates from time to time to wash up, or do repairs, &c. The tunnel is driven in the solid rock on the west side of the gorge. The floor of the tunnel is brought to an even gradient by fastening large trans-