Merivale.—Gold has recently been discovered here by Messrs. Fraser and McGregor; but up to the time of my visit on the 30th of November last nothing of any importance had been found. I prospected in several places, and found colours of gold, and was shown small samples, but nothing of a payable character. The place where the prospectors are working is situated about two miles and a half south of Merivale Station, on the end of the Longwood Range. The gold is of a coarse, spongy nature, resembling quartz-gold, and evidently has not travelled far. Mr. Richardson, who has a share in the prospecting-claim, showed me everything that was to be seen, and stated that there were about seventy miners altogether on the field, but they were scattered here and there over a large area of ground covered with heavy bush, without any tracks, some of the parties being six miles further south than the prospectors. One man came to the prospectors' claim while I was there, and stated that gold had been got in a quartz reef a few miles further along the range, and that the reef was pegged out for a long distance; but the time at my disposal would not admit of visiting the locality. There were several quartz leaders which had been cut at different places on the range near the prospectors' claim; but the quartz appeared of a very barren nature. From the appearance of the country and the character of the gold I saw, I think this is a place well worthy of prospecting, and a place where gold is likely to be obtained, both in alluvial drifts and in quartz. A few pounds would be well spent here in cutting lines through the bush to allow prospecting to be carried on. I have to thank Mr. Hirst, M.H.R., who kindly accompanied me both to this field and the Waiau, and gave me a deal of useful information respecting the nature of the country about Longwood, with which he is well acquainted.

West Coast, Westland.

Humphrey's Gully Company.—This company's working is situated at Humphrey's Gully, near the Arahura River, about thirteen miles from Hokitika. The company holds mining-leases comprising an area of about two hundred acres, which is intended to be worked by hydraulic sluicing. In order to conduct mining operations on an extensive scale, this company has constructed the largest water-race in the colony; but now finds it will have to be extended to the different tributaries of the Arahura River, and probably to the river itself, before a sufficient supply of water is obtained. The present supply is taken from Granite Creek; but this is only capable of giving about eighteen sluice-heads for sixteen hours per day. The works in connection with this water-supply are as follows:—

Headworks.—A dam has been constructed in Granite Creek by an earthwork embankment, being about 3 chains long on the top and 35ft. deep, having a puddle-trench in the centre 14ft. wide at the bottom and 6ft. at the top, while the total width of the embankment on the top is 12ft. It has a slope of 1 in 3 on the breast or inner side, which is covered with broken metal, and the outside or back slope is 1 in 2. An outlet-tunnel is constructed on one end of the embankment through solid rock, with a sluice-gate fixed at the intake end, the frame for which is set in concrete. The sluice-gate is constructed with planks 6in. in thickness, and covered with boiler-plate on the side next the face of tunnel, and slides on the face of iron rails, which are bedded into the concrete. The main sluice-gate is 5ft. high and 4ft. wide, and has a relief-gate in the centre 18in. by 12in. Both of these gates are lifted with geared pinions and screws. When the main sluice-gate was first constructed it was found that one man could not raise it with the gearing, and this led to the relief-gate being constructed in order to lessen the pressure on the main gate, which is equal to about twenty tons when the dam is full. The dam is capable of holding 5,300,000 cubic feet of water, or about thirty sluice-heads for two days.

Water-race.—The water is carried from the dam in an open conduit for 40 chains, where there is a flume constructed 59 chains in length, having a maximum height of 45ft. This flume is 5ft. 4in. wide and 4ft. deep, having a fall of 33ft. per mile. At the lower end of this flume there is an open conduit and several short tunnels, 6ft. wide at the bottom and 5ft. deep, constructed on a grade of 1 in 660. The water is then taken through a high range by a tunnel 60 chains in length, which took three years to construct, owing to blue reef, or what is termed pug, having been met with, which time after time filled up the tunnel for 6 chains in length, causing deviations to be made from the straight line to try and cut through better ground. This tunnel, which under ordinary circumstances ought to have been constructed for at most £6,000, cost about £11,000. The total length of this water-race is between six and seven miles; but the company is now constructing an extension above the headworks for four miles further, which their engineer estimates will give at least ten additional sluice-heads of water in dry weather. Of this distance, 2 miles 60 chains are already completed, and the remaining distance in course of construction; but, judging from the area of the watershed of the creeks that will be brought in when this extension is completed, there will not be a permanent supply to fill the race, which is capable of carrying a hundred sluice-heads of water. This, however, can be obtained by still further extension of about four miles to the Arahura River.

Workings.—The ground is worked from two faces, in one of which there are two 6-inch nozzles, and in the other one 6-inch nozzle, under a head of 220ft.; but the supply-pipe for these nozzles is at the present time far too small to give the effective force of water from the nozzles on the face, the supply-pipe being only 15in. in diameter at the top. This is so fixed that a large quantity of air is drawn into the pipe, which destroys the solidity of the force. The company's engineer, Mr. McArthur, informed me that he was getting a larger pipe in place of the present one, which will, no doubt, give a far greater effective force to the