out, and the lead has been traced into the flat; but instead of going straight into the river, the ancient bed of the creek was found to turn round nearly at right angles to the line of the gut previously referred to, and, from the present appearance of the run of the deep ground, will cross the bed of the river and go underneath the old township, or it may be when it is traced into the river that it may follow the course the river has now taken; but, be that as it may, the ground on the flat is about 60ft. in depth, consisting of a fine quartz drift-wash, but the upper portion of the wash-drift contains very little gold. There was a paddock excavated in the flat at the time of my visit, which was estimated by the manager, Mr. Charles Hilgendorf, to contain 60,000 cubic yards of excavation, and the quantity of gold obtained from the quantity of material was 220oz., being an average of 1·76gr. of gold per cubic yard, but as there was scarcely any of the bottom-wash taken out of the paddock, the manager anticipates getting a much better washing next time.

There seems to be a difficulty in working this ground, owing to the soft nature of the reef or bottom on which the quartz wash-drift is lying. As soon as the bottom gets exposed to the water and the atmosphere it becomes soft, and spues up, causing the upper portion of the ground to come in; hence the large quantity of the upper portion of the material that had to be taken away before getting the bottom portion lifted. The lead appears to get much wider as it goes out into the flat, and until the bottom of the paddock is taken up and washed it will not be ascertained whether the rich auriferous layer of drift found in the bottom of the gut will continue into the flat. The company have gone to a considerable expense in providing a good plant, and in opening out the ground, and their capital being too small to meet all the expenditure, they had to borrow a considerable sum of money to complete their undertaking; and the interest on the borrowed money, in addition to the ground being poor, it is a difficult matter to make ends meet.

This company has three water-races, two of which lead the water into a reservoir which is constructed in the bed of the Nardoo Creek, and one from this reservoir to the penstock, where the water is conveyed in pipes to their claim. One of the water-races leading into the reservoir is twenty-two miles in length, and the other twelve miles, and these take their supply of water from the several creeks they cross, but the principal supply is from Nardoo Creek, where the dam is constructed. The main supply-race from this dam is 5ft. wide and 2ft. deep, constructed on a gradient of 1 in 60 or 8ft. to a mile. The cost of the construction of this race is said to be £100 per mile. From the penstock to the ground that is now being worked the distance is about 100 chains, or 6,600ft. Of this distance, about 2,000ft. of the upper end is constructed of wrought-iron pipes, No. 14 B.W.G., which are 18½in. in diameter, and the remaining portion consists of pipes 15in. in diameter, No. 12 B.W.G., double-rivetted in the longitudinal seams. The total hydraulic head is said to be 400ft. The manager stated that he had lifted material as high as 80ft., but at the time of my visit they were only lifting the material about 52ft., using a jet 2¾in. in diameter, having the sluicing-nozzle 1½in. in diameter. Taking the velocity of water due the discharge of water from a jet 2¾in. and one 1½in., it equals 7·7 cubic feet per second, which is equal to a velocity in a pipe 15in. in diameter of 6·27ft. per second, and, omitting the loss of head altogether in the portion of the pipe 18½in. in diameter, which is equal to 46ft., the hydrostatic head would not exceed 350ft.; and, as the quantity of water discharged by a jet 2¾in. in diameter under a hydrostatic head of 350ft. is 5·94 cubic feet per second, then $\frac{350 \times 5{\cdot}94}{7{\cdot}7 \times 52} = 4{\cdot}97$, the ratio of the power used for lifting the material; but the manager also stated that he sometimes used a sluicing-nozzle 2in. in diameter, and in that case the ratio of power used would be 4·02. There is a large extent of unworked ground, but the problem to be solved yet is whether it will pay to work. The quantity of gold obtained by the company during the year ending the 31st March last is said to be 354oz., which represents a value of £1,372. This amount does not leave any margin of profit.

Tuapeka District.

This is beginning to look a deserted goldfield; the different gullies and flats where gold was found in the early days have been turned over again and again, and, even yet, some of the Chinese seem to make a livelihood, but the number of these is gradually getting less every year. The only workings of any magnitude that are being carried on are those at the Blue Spur, Gabriel's Gully. Where, in the sixties, there was a large population earning good wages by extracting the gold from the drift in the most primitive manner, there is now one mass of tailings from side to side of the gully; none of the original surface is left to work. At the place where at one time over a thousand men were at work, only about six Europeans and three Chinese are now to be found. At Weatherstone's the same deserted appearance is seen; but, instead of the ground being covered with tailings, there is a network of holes and mounds of excavated material, marking the remains of the active operations that were carried on in the early days. There is still ground here that would pay for working if water was available, but all the principal water-races are now held by the Blue Spur Company, and utilised by them at the Blue Spur.

Blue Spur Company.—This company, previous to last year, was working the tailings in the bed of Gabriel's Gully and cutting an opening into the cement. This paid handsomely for working; but it has been always considered questionable whether the cement which goes through the range between Munro's and Gabriel's Gully could be worked by this company at a profit. During the last year their workings have been entirely confined to the cement, and the results of working it has proved very satisfactory. The quantity of cement operated on for ten months ending the 31st December last was 137,000 cubic yards, and the quantity of gold obtained from this was 1,589oz., representing a value of £6,109, showing the value of the material to be 10·7d. per cubic yard, or each cubic yard contained 5·56gr. of gold. The total quantity of gold obtained from the 1st January, 1892, to the 28th January, 1893, was 2,130oz., representing a value of £8,193, while the working expenses average about £490 per month when in full working order; but there is some time during the winter months that the work is suspended on account of frost and other causes. The cement, therefore, may be considered payable for working, with a considerable margin of profit. To take