

## CATLIN'S-WAIKAWA ROAD,

From the Purakanui Creek to the Tautuku Beach, which was in course of construction from about the 30th of June, 1891, to the 31st of March, 1892.

*Schedule of Works.*

This road is the main through road from Owake to Waikawa, the approximate distance formed from the 30th June, 1891, to the 31st March, 1892, being 3 miles 41 chains. Contracts were let on the co-operative principle on the 15th May, 1891. The road-formation is 15ft. wide; slopes in cuttings  $\frac{1}{2}$  to 1, and of embankments  $1\frac{1}{2}$  to 1. In some cases the work consisted of "spoil-bank" and side-cuttings, and in others block-cuttings, with from 2 to 3 chains of a lead. Within half a mile of the Taupuku Beach very heavy rock-cuttings were encountered, one cutting in the deepest part measuring about 26ft. deep. The rock was approximately half clay and soft rock, and the other half of a hard bouldery nature. This part of the road, though expensive considering the distance, is of a thoroughly permanent character. Culverts have been built as circumstances required all along the road to the Tautuku. They are built principally of kamai, black-pine, and totara where available. Particulars as to number and cost, &c., are given on the attached schedule.

The number of men employed on this road, including the few who were on the works before the co-operative contract system was initiated, were, approximately, from July, 1891, to March, 1892, as follows: 75, 99, 108, 98, 86, 63, 37, 22, and 13 for each month respectively. These men were nearly all from Dunedin, as far as I am aware. The agreement with the contracting parties was to form the road according to plans and specifications, including stumping, water-tables, and culverts. Contractors had to find their own tents and tools. They were supplied by the department with all necessary appliances, and charged by instalments the cost of the same. All material sold was at cost price on the works (see accompanying schedule for prices). On the whole the men earned fair wages. Considering the number of men there was very little grumbling; the best workmen would earn from 8s. to 9s. per day, and the old men and others not acquainted with the work from 4s. to 5s. With the exception of a few parties who were new to the work the men formed the road up to the requirements of the specifications. Taking into account the nature of the work, and the distance the material had to be conveyed, the work could not have been done cheaper by any other mode of contract. Rock that can be utilised for metalling the road shows in four places all along the road to the Tautuku, and quarries have been reserved here and there in suitable places; but for all that it will be a serious item of cost to metal the road, owing to the wet climate. Being a bush-country, the cost of quarrying and haulage will be expensive.

*Schedule of Prices given for the Earthworks, Rock, Stumping, Culverts, and also Number of Culverts built.*

*Earthworks.*—In some cases earthworks included stumping, and in others the stumping was paid for separately. The prices ranged from 10d. to 1s. 2d. per cubic yard, according to length of lead, &c. The extra on the price per cubic yard was calculated on the total number of yards in the contract; and if, say, £1 per chain gave 2d. per yard that was added on to the price given according to the lead, so that practically so much per chain and so much per yard were the same. The stumping was valued at per chain first. The price per chain ranged from £1 up to, in one particular case, as high as £3 per chain, but the average would be about £1 5s. Rock was got in one place, and the price paid to get it out was 2s. 6d. per cubic yard; but the quantity was small. At the cliffs near the Taupuku Beach the prices paid were 10d. for soft and 1s. 9d. for hard rock, and at the Tautuku Beach 1s. 3d. was paid for the rock. These prices were reasonable, and the men made good wages.

*Culverts.*—The prices almost invariably were 4s. per lineal foot, including all excavations; a few culverts were let from 2s. 6d. to 3s. and 3s. 6d. per foot, but these were smaller than usual. The prices were rather high, but were the lowest that could be got by tendering. The total number of culverts on the road from the Purakanui Creek to the Tautuku Beach is thirty-four. These bridges were built over the following creeks: Purakanui, Purakauti, and the Pillans; the spans (one span to each bridge) being respectively 20ft., 15ft., and 17ft.

*General Remarks.*—The roadworks in the Catlin's District are heavily handicapped, owing to the larger number of men being sent up in the winter time. If it were possible to keep the men vigorously employed during the summer months without injury to the farming interests the work would be done better and cheaper, and more satisfactorily to the department and to the men employed. As it is we are leaving the metal roads far behind, and the haulage of material and provisions becomes very expensive. I would suggest that I be empowered to purchase back from the men when leaving any tools, barrows, &c., at a fair valuation. The men at present on leaving simply sell the tools, &c., at a sacrifice to the settlers, who have now become possessed of nearly all the plant that was bought last year. This would entail a bit of book-keeping, but would be more satisfactory to the men, and the department would have less plant to purchase than at present.

*Schedule of Prices of Tools, &c., sold on the Works.*

Short shovels, 3s. 6d. each; mattocks, 4s. 10d. each; picks, 3s. 8d. each; barrows, 19s. each; axes, 4s. 11d. each; axe-handles, 9d. each; 8ft. by 10ft. tent and 10ft. by 12ft. fly, £1 each; L.H. shovels, 4s. 3d. each.