

REPORT ON THE TELEGRAPH DEPARTMENT.

The expenditure of the past year has been largely increased through having had partially to reconstruct the several sections referred to in Appendix B. I consider that at least £2,000 of the £7,022 Os. 10d., the cost of the maintenance of the line from Bluff to Napier, has been expended in this way. The enormous cost of the maintenance of the Auckland line has been caused by its thoroughly bad condition; and until such time as the line is renewed, the same results may be looked for. This large item of expenditure in the maintenance of the lines of the Colony is in a great measure caused by the use of inferior timber for poles, a most fatal mistake,—and one which will always involve a large expenditure so long as anything but totara is used,—where timber has to be taken any distance.

I think, on the whole, that the Department shows a steady and satisfactory increase, more especially when the generally depressed state of trade throughout the Colony during the past year is taken into consideration. I have every reason to believe that the day is not far distant when the revenue of the Colony will be considerably augmented by the receipts of this Department. There is no doubt that the use it has been to the Government during the past year has been the means of saving thousands of pounds to the Colony.

The Hon. the Telegraph Commissioner,
Wellington.

I have, &c.,
C. LEMON,
General Manager.

Appendix O.

COMPARATIVE TABLE of INSULATION TESTS of the COOK STRAIT CABLE for the Years ending 1867-8 and 1868-9, showing the resistance per knot, after two minutes' electrification, in millions of Ohms (British Association units of resistance).

| Date. | No. 1 Wire. | No. 2 Wire. | No. 3 Wire. | Date. | No. 1 Wire. | No. 2 Wire. | No. 3 Wire. |
|----------------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|
| September 1, 1867... | 473 | 71 | 554 | September 11, 1868... | 630 | 22·5 | 946 |
| " 30, " ... | 634 | 102 | 634 | " 17, " ... | 697 | 63·5 | 1,000 |
| October 14, " ... | 547 | 179 | 620 | | | | |
| November 1, " ... | 598 | 32·6 | 667 | | | | |
| " 14, " ... | 574 | 10·6 | 643 | | | | |
| December 2, " ... | 608 | 10·5 | 709 | | | | |
| | | | | March 27, 1869... | 467 | 26· | 729 |
| | | | | April 19, " ... | 483 | 30· | 743 |
| | | | | May 11, " ... | 562 | 31· | 950 |
| | | | | " 17, " ... | 531 | 14· | 963 |
| *June 7, 1868... | 930 | 5·5 | 1,094 | June 22, " ... | 522 | 15· | 931 |

* NOTE.—This test was taken with zinc to earth—all the others with copper to earth.