

*Wairoa*.—No trouble was experienced here during the year.

*Gisborne*.—Due to a series of faults on the Poverty Bay Power Board's system, the earthing reactor burnt out and had to be rewound.

(c) TRANSMISSION-LINES.

(i) 110 kv.

*Mangaore-Khandallah Duplicate Line*.—The special maintenance gang has been occupied on this line during the year. A very considerable amount of maintenance work has been carried out, including refitting and shortening poles, changing insulators, and other miscellaneous work.

Stiffening of all towers on this line has been completed, and a cross-arm on tower 58, which failed while changing insulators, was repaired.

During the month of October, 1935, a flood in the Ohau River washed out one transmission-line pole and a flood in the Waikanae River endangered two poles, necessitating urgent protective work being carried out. Subsequently, four poles at the Ohau River were replaced by two piled poles, there being sufficient clearance to eliminate two poles altogether. Similarly, at the Waikanae River, two double poles were replaced by two piled double poles, and two single poles were piled.

On the telephone-line a deviation had to be made near Paekakariki to avoid peat fires in the swamp. Two poles were replaced at the Ohau River by one piled pole and a deviation made at the Waikanae River after the October floods, three of the poles in the new line being piled. As a result of these alterations, some six miles of galvanized-iron wire were replaced by copper-weld, and all dry joints were soldered.

During the gale on the 2nd February, 1936, no trouble was experienced on the west line, but three faults occurred on the east line. In the vicinity of Waikanae and Waitohu branches of trees were blown across the line, while near Mangahao Power-house a conductor was broken by the gale. In addition, a fairly large number of poles were loosened in the ground and were found to have a lean towards the west; these were subsequently straightened and re-rammed.

On the telephone-line most of the trouble was caused by trees or branches being blown across the line, breaking the conductors in several places. Several poles were pulled out of line near Waikanae, a lightning-arrester insulator was broken at Potts Road telephone-hut, and a quantity of hay was blown into the line near Ohau and Manakau.

The gale was evidently less severe on the southern section, as no trouble was experienced on the main line south of Waikanae and on the telephone-line south of Paraparaumu.

Poles replaced: 17 transmission-line and 20 telephone-line.

Poles dismantled: 10 transmission-line and 6 telephone-line.

New poles erected: 8 transmission-line and 9 telephone-line.

Broken main line conductors: 1.

*Khandallah-Melling*.—The usual maintenance work was carried out on this line, no trouble being experienced during the year.

*Mangaore-Bunnythorpe Duplicate Line*.—Protective work was carried out at the Manawatu River, and strengthening work was completed on the two river towers and the four towers at Mangaore.

During the storm on the 2nd February a conductor was broken by flying material on the west line near Linton; otherwise the damage was confined to poles being blown out of plumb, and a number of hanger brackets which were blown up and had to be readjusted after the storm.

The telephone-line suffered considerably during this gale, two poles being broken, Victoria telephone-hut wrecked, and Whitmore telephone-hut being blown off its foundations.

Poles replaced: 6 telephone-line.

Broken poles: 2 telephone-line.

Main-line conductors broken: 1.

*Bunnythorpe-Marton-Wanganui*.—Protective work was carried out at the Oroua River crossing, and poles were inspected for sun cracks. No damage was done to the main line by the gale on the 2nd February.

A large amount of damage was done to the telephone-line during February's gale, due to trees falling on the line; at the Wangaehu River crossing the wires were tangled, presumably by a tree coming down the river, which was in high flood.

Poles replaced: 2 telephone-line.

Poles broken: 1 telephone-line (broken by car).

*Wanganui-Hawera-Stratford*.—During a lightning-storm on the 18th October, 1935, a considerable amount of damage was done to the main transmission and telephone lines. On two structures the damage was mainly confined to shattered insulators, while on a third structure, in addition to shattered insulators, one pole was split.

A post unit on the Waverley air-break switch which had probably been damaged by a rifle-bullet was replaced and the steelwork scraped and painted. Earthing-mats were fitted to the Wanganui River towers.

No damage was caused by the high winds on the 2nd February.

After the lightning-storm mentioned above, one pole and six crossarms had to be replaced.

Poles replaced: 2 telephone-line.

*Stratford-Pohokura*.—No trouble was experienced on this line during the year.

The telephone-line was deviated to provide better clearance at the Toko rifle range, and five binders had to be replaced after the storm on the 2nd February.

*Bunnythorpe-Woodville*.—No trouble was experienced on the existing west line, and all towers on this line have now been strengthened.