

This close comparison is a very favourable coincidence, but in 1905 Messrs. Skeet and Bullard remeasured the Waitara base, with the following results :—

Mr. Skeet used a 10-chain band, weighing 2·5 lb., and under a strain of 14 lb.; Mr. Bullard used a 5-chain band, weighing 18 oz. 9 gr. under a strain of 14 lb. In both cases the bands were supported, at 1-chain intervals, about 3 ft. above the ground. The bands were in terms of the Imperial standard steel tape No. 4—the same reference tape as used for the present measurement.

							Links.
Value by Mr. Skeet	..	..	..	..	..	..	15944·712
Value by Mr. Bullard	..	..	..	..	..	..	15944·842
Difference	..	..	..	..	..	..	0·130
Mean	..	..	..	..	..	..	15944·777
Original length of the base as used in the triangulation of the Taranaki							
District and measured in 1878	..	..	..	..	..	..	15942·700
Difference	..	..	..	..	..	..	2·077

Now, if the line Eltham-B (Waimate) by the old triangulation is brought into terms of the amended value of the Waitara base by Messrs. Skeet and Bullard, the value will be 79614·671 (S.O., New Plymouth). Present measurement, 79605·123; difference, 9·548, representing about 0·96 of a link per mile.

The following tables and illustrations are forwarded :—

Table No. 1.—Results of the measurements.

Table No. 2.—Results of the comparison of the New Plymouth standard steel tape No. 4 with the Head Office Imperial standard steel tape No. 1.

Fig. No. 1.—Diagram showing the base net of triangles.

Fig. No. 2.—Plan and section of base.

Fig. No. 3.—Balance with reader, &c.

Fig. No. 4.—Canvas shelter-tent.

Fig. No. 5.—Measurement across a gully.

Fig. No. 6.—Carrying tapes forward.

Fig. No. 7.—Nature of country looking north from stop-peg (aa).

Fig. No. 8.—Nature of country looking south from stop-peg (aa).

I also forward two tracings, on a scale of 10 chains to an inch, giving all the detail mean measurements along the line, one copy being for the Taranaki District Office.