

could be done with a six-inch theodolite. Unfortunately, it went no further at that time, and has never been resumed; but, little as it is, it is trustworthy and may be used again, and it served to reveal very gross errors in the old surveys which it embraced.

For some years past no new surveys of any extent have been made; the little that has been done has been chiefly in flat forest lands, systems of main and circuit traverses forming the basis of the work. Altogether there are probably some 10,000 acres of trustworthy section-surveys in the province. The old work is, in Mr. Humphries' opinion, valueless for further use; many of the field-books are missing, and for miles together no original survey-marks can be found. He cannot tell what in it is right and what wrong. The abstract of progress stands thus:—

	Acres.
Correctly section-surveyed	10,000
Section-surveyed, but needing revision	130,000
Unsurveyed	1,997,000
Total area of Taranaki	<u>2,137,000</u>

Accurately triangulated, 12,000 acres.

NELSON.

Out of the 7,000,000 acres which make up the area of this province, scarcely one-fourth has been reached by survey of any kind, some 225,000 acres only having been sectionally surveyed, and but 1,350,000 acres topographically surveyed. One-fifth of the province is still unexplored. It is perhaps fortunate in a certain sense that the work has made so little progress; for the general want of system and accuracy which affected the early operations in most of the provinces of New Zealand seems in Nelson to have prevailed to perhaps a greater extent than in any other. Such, indeed, was the state of confusion into which the surveys drifted steadily during many years of neglect and mismanagement, that the best efforts of later officers to put them on a proper footing have been well-nigh paralysed, hampered as these gentlemen have also been by want of funds and the pressure of their regular work. Naturally, under these circumstances, I did not find it easy to disinter the past history of the surveys, or to estimate their real value, although in my endeavour to do so I was very willingly helped by the officers of the department. I give an outline, however, of all that I could ascertain.

The first surveys seem to have been made between 1841 and 1844, under the New Zealand Company, in scattered blocks about Nelson and the north part of the province, amounting in all to some 100,000 acres of section surveys, the principle being mainly that of survey before selection. It is enough to say of them that they were of the same type as the many inferior surveys in other parts to which I have already drawn attention. Great difficulty has ever since been experienced in piecing together various parts of the same block done by different men. When surveys of opposite sides of the Waimea River came to be juxtaposed, it was found that they overlapped to such an extent as to completely block up the channel, and it took months to assimilate the two pieces of work. The town of Nelson, which was surveyed at this time, was also seriously affected by errors of the same class; and on some of the record plans in the office I found gaps and overlaps of three and four, and in one case of ten chains still left, with no present hope of rectifying them. A good deal of carelessness, too, seems to have prevailed in the preparation of the record-plans and grants, both of town and rural sections, many of which have since been found to differ from one another, as well as from the MS. plans. Most fortunately, whether from indifference, or despair, or fear of expense on the part of landowners, no serious legal difficulties have yet resulted from these various errors.

From 1844 to 1851, hardly any progress was made. But in the latter year, and up till 1856, small detached surveys were carried on here and there in a desultory way, under the Colonial Government. Nothing could well exceed the recklessness which now prevailed. Numbers of surveys of the roughest kind were made all over the country, and the only original records of them which remain are rude drawings—many of them mere pen and ink sketches—on half-sheets of note paper and scraps of all sizes, which have been collected together and pasted into volumes. Some of them have no scales marked on them; some have no bearings shown; and some are unconnected with anything to tell of their whereabouts. The lands, nevertheless, were sold and Crown granted on the strength of these documents, many of them absolutely unworthy of the name of plans. Several disputes have taken place in consequence. To cite an instance, the well-known case of *Hunt v. Wells*, which lasted for several years, arose out of an error by which, from the want of sufficient details on the surveyor's plan, a plot of land was wrongly placed on the record map, and Crown granted accordingly; while later, from the same map, the land where the first plot should have been was granted to another person, who then, on the strength of his paper grant, set to work to eject the actual possessor.

About 1856 the province began topographical surveys of the pastoral lands in the south-east; and between that year and 1867 a block of some 700 square miles was roughly surveyed in three or four different pieces, part by contractors and part by the staff. The maps of these surveys, which are on the scale of four inches to a mile, showed the chief natural features and the proposed boundaries of runs, as traversed in some cases with small theodolites, and in others