The mining surveys are all made with a theodolite, but on magnetic meridians; and the surveyor, in sending in his plan, has to show the variation between this and the true meridian. He has likewise to send in the calculation of the area of the block, deduced from the meridian and perpendicular distances.

In making inquiries as to why the surveys could not be done by the Survey Department, Mr. Langtree informed me that in many instances where these surveys had to be made the officers of the Survey Department were engaged at other work, and left the mining surveys to stand over for such a length of time that before the ground was surveyed the applicants were put to a deal of inconvenience, and had in some instances left the district. This led the Mines Department to have officers of their own for this special work.

NEW SOUTH WALES.

The mining surveys here are partly done by the Mines Department and partly by surveyors authorized by the Survey Department; but, as the latter are paid by fees, and the mining surveys are frequently in widely-dispersed localities, which will not pay the authorized surveyors, they are, as a rule, executed by salaried surveyors of the Mines Department. These are divided into two classes—namely, first class and second class. The first-class surveyors receive a fixed salary of £300 per annum, with an equipment allowance of £100 and travelling allowance of £300, and all fees, together with railway fares for self and one man. Surveyors of this class are employed in making isolated surveys, and have to travel over large areas of the colony. Second-class surveyors receive a stated salary of £300 per annum; equipment allowance, £100; travelling allowance, £100, and all fees, together with railway fares for self and one man; but surveyors of this class have not so much travelling as those of the first class.

In each of these cases the plans are drawn by the department; but the surveyors pay their own men. Each Mining Surveyor before being gazetted must pass the Surveyor-General's examination.

The fees to surveyors are as follows:—

Gold-mining Leases.

	£	s.	d.
Less than 1 acre	1	0	0
Exceeding 1 acre and less than 5 acres	1	10	0
Exceeding 5 acres and less than 10 acres	2	0	0
Exceeding 10 acres and less than 20 acres	3	0	0
Exceeding 20 acres up to 25 acres	3	10	0

Mineral Leases.

	£	s.	d.		£	s.	d.
20 acres and less than 40 acres, if isolated,	4	0	0;	when conterminous,	3	0	0
40 " 80 "	5	0	0	"	3	15	0
80 " 160 "	6	0	0	"	4	10	0
160 " 320 "	7	0	0	"	5	5	0
320 " 640 "	8	0	0	"	6	0	0

Lineal measurements are paid at the rate of £1 10s. per mile.

The same system prevails in New South Wales as in Victoria—namely, that all surveys have to be made with a theodolite on magnetic bearings; but the surveyor has to show the variation between this and the true meridian. When isolated surveys are made they are connected to some permanent object, as a rock, &c., as there are no trigonometrical stations in the interior to connect them with; but where a number of surveys are made in one locality they are connected one on to another.

The instructions sent to Mining Surveyors from the Chief Mining Surveyor of the colony are, "That they are to make connections to some fixed points on a previous survey made under the Crown Lands Amendment Act, or to some survey known by the surveyor to have been so connected. If there are no surveyed lands within a reasonable distance some conspicuous object of a permanent nature may be used. This system is not all satisfactory, as the variation shown between the magnetic and true meridian differs with each instrument employed: there are scarcely two instruments that will show the same difference. These compass surveys will inevitably lead to future litigation, as we have experienced in former years in New Zealand in the case of Blue Spur, Otago, where thousands of pounds were expended in settling a dispute on boundaries through magnetic surveys. The trigonometrical system of survey now in operation in New Zealand is the only effective means of definitely defining areas so as to prevent any doubt or confusion in the future as to boundaries.

The systems adopted in both New South Wales and Victoria are, to say the least of them, very loose, and they bear no comparison with regard to efficiency to the New Zealand system. There is no doubt the surveys in those colonies are conducted on a cheaper scale than in New Zealand; but the nature of the country, which is comparatively level, with open bush and large plains, would admit of this in any case, even if they adopted our system: whereas our mining country is in most instances very rough and broken, and in parts densely timbered, with thick under-scrub. Although the surveys in the Australian Colonies I visited are cheaper in the first instance, they will ultimately have to adopt a system similar to ours; in fact, their officers admit this, and state distinctly that our system is the most perfect in any of the colonies. The longer they continue on the present course the greater the complications will become as the country gets settled. Our survey system is beyond doubt far superior to that in practice in the colonies I have recently visited; and, as all our mining districts are now triangulated, surveys can be accurately and promptly executed.