

Road, Wakatipu to Milford Sound.—The survey of the first twenty miles from Lake Wakatipu was completed previously to the work done last year, but it is yet a question for further trial-lines to be made to see if the end of the surveyed line can join on to a road from the mouth of the Clinton River. The surveyed line goes up the valley of the Greenstone River and on to Lake Howden. This was undertaken after a report was received from Mr. Holmes, Resident Engineer in the Public Works Department, who was sent to make a reconnaissance survey of the route. Mr. Holmes reported in favour of a line up the Hollyford Valley to Homer's Saddle, and thence down the Cleddau Valley; but this route was, after further investigation, found to be utterly impracticable. The survey of the Lake Wakatipu end had been completed to near Lake Howden before this became known, and a reconnaissance survey was then made from Lake Howden to the head of the Te Anau Lake, which proved that a road could be constructed in this direction, but the line is not a good one.

At the Milford Sound end the road has been surveyed for four and a half miles up the valley of the Arthur River and the side of Lake Ada; and at the time of my last visit to this locality, in March last, about forty chains of a dray-road on the Milford Sound end had been constructed by prison-labour. It is intended to construct only a horse-track in future, but it will take a long time to connect the Sound with the head of Lake Te Anau. The cost of the work up to the end of March last has been £3,251 7s. 8d.

Road, Garston to Nevis.—This road was constructed over a range about 3,000ft. above the level of the sea, so that in winter time it is always blocked with snow. The construction of the road has, however, been the means of reducing the cost of carriage of goods to the Nevis by about one-third. This road passes through two counties, neither of which would for some time take it over, necessitating the cost of maintenance by the department before the Lake County would take charge of the road. The total cost of the work has been £1,545 18s. 8d.; of this amount £1,469 17s. 2d. has been paid.

Deviation of Road, Pleasant Creek Terrace.—The dray-road is constructed from Queenstown to the bridge across the Shotover River at Pleasant Terrace, but at the other side of this bridge there is an extremely steep zig-zag track. A deviation was proposed by the County Council to avoid this steep portion of the road, at a cost of £130, which was authorised. It was, however, found, after inspection of the work by Mr. Gow, the Inspector of Mines, that the deviation was being constructed with unnecessarily steep grades, and the department accordingly refused to give any money towards the work.

Road, Waiau to Preservation Inlet.—A survey has been completed for nine miles on the Preservation Inlet end, and the bush felled for a distance of six miles and a half to a width of 30ft., with clearing in the centre, so as to form a good foot-track. The total cost of the work to the end of March last was £356 13s. 4d.

SCHOOLS OF MINES.

THAMES SCHOOL OF MINES.

The attendance at these schools shows that the benefits derived are better appreciated every year. During 1889-90 the average number of individuals who attended the classes at the Thames School was 33; for 1890-91 the number was 93; and for the last year the average number was 111. This included the Saturday classes; but independently of these classes the average number attending the school was 33, 45, and 58 for the different years respectively, or the number last year was $1\frac{3}{4}$ times as many as the attendance in 1889-90. When this school was first started many of the miners were under the impression that very little good would result from technical teaching beyond enabling them to distinguish the different classes of ores met with; but during my recent visit to this district every one spoke with well-merited praise on the good work being done. Students from different parts of the colony attended the classes last year, some of whom are men well advanced in years, showing that not only is the school appreciated in the Thames District, but that the results of the teaching are becoming known throughout the length and breadth of the colony. Indeed, one of the late students of the School of Mines attached to the University of Dunedin, who had gone through his course of mining training there and got his diploma as associate, was employed last year for some time at the Thames School as an assistant, and he informed me that he was perfectly surprised at the high class of teaching, the different subjects taught, and the progress made by the students attending the classes. The advantage of this school over any other in the colony is that many of the students are men well acquainted with the practical working of mines, and those who have not that knowledge can visit any of the mines and see for themselves by actual demonstration the different methods adopted in working a mine; this, together with a theoretical training, will indelibly imprint on the mind of a student a clearer knowledge of the subject he is grappling with, and in less time than it could possibly take were his education confined entirely to book-knowledge.

During the past year six different parcels of ore—as shown by the accompanying statement—were treated at the experimental plant, two of these being from Puhipuhi. One parcel of 84lb., from the Luminary Mine, having an assay-value of £1 8s. per ton, yielded bullion to the value of £1 3s. 4d. per ton; and the other parcel of 1,900lb., of an assay-value of £9 9s. 11d. per ton, yielded bullion at the rate of 91.5 per cent. of its assay-value. Both of these parcels were crushed dry, and afterwards treated by hot-pan amalgamation. Other three parcels of ore—two from the vicinity of Waitekauri, and one from the Thames—were crushed wet and treated by hot amalgamation, yielding 85 per cent. of the assay-value. In treating parcels with this test-plant the students have to do the actual labour themselves.