5 E.—7.

Ulrich Medal.—This medal is appropriately awarded in each year to the best student in mineralogy and petrography. It was open for competition for the first time in 1902, and was

secured by James Allan Thomson with a first class in each subject.

New Zealand University Examinations.—Five students presented themselves for examination in different sections of the B.Sc. degree in mining and metallurgical engineering, one student for honours in science, two for senior scholarships, and three for final examination in B.Sc. The results were eminently satisfactory, and in several directions established records, which rendered the year 1902 memorable in the history of the Mining School. Of the five in the B.Sc. division, Norman R. Fisher succeeded in passing the third and final examination, thereby securing the first B.Sc. degree in mining engineering granted by the New Zealand University. He passed the class subjects at the Mining School some years ago, having been a student of the late Director in mining, of Dr. Don in geology, and of Mr. Begg in surveying. Mr. Fisher subsequently pursued his studies with unremitting diligence, and must be congratulated on the successful attainment of his object. David M. Tomlinson, following the footsteps of Mr. Fisher, passed the second examination for B.Sc. in metallurgical engineering; William Gibson and H. Roy Macdonald, part of the first examination in mining engineering; William Gibson B.Sc., certain subjects in metallurgical engineering.

The highest distinction aimed at by mining students in previous years was the diploma of Associateship, but in the past three years there has been a growing desire on the part of a few to qualify for the higher degree of B.Sc. in mining or metallurgical engineering, and it is not improbable that in coming years many will elect to follow this course. It is needless to say that the New Zealand University requires a higher standard of attainment for its B.Sc. degree than the

Mining School for its diploma of Associateship.

John Henderson, B.Sc., also sat for honours in science, and was successful in gaining first-class honours in geology. This is the second occasion on which this distinction has fallen to the University of Otago, and the first time it has been secured by a student of the Mining School.

Arthur R. Andrew, in the University Senior Scholarship Examination, secured the scholarship in physics, and J. Allan Thomson the scholarship in geology. The senior scholarship in physical science has now fallen to the Otago University on six different occasions, but this is the first time it has been gained by a mining student. It is equally worthy of mention that the scholarship in geology won by Mr. Thomson is the only one that has so far been secured by a student of Otago University. Thus, of four senior scholarships won by Otago University in 1902, two were secured by students of the Mining School. Our geological students have especially distinguished themselves in the University examinations, and Dr. Marshall, Lecturer in Geology, deserves much commendation for his enthusiasm and careful instruction. With the good fortune to obtain students equally devoted to their work, the same satisfactory results may be looked for again in future years.

The economic value of geological science in connection with mining has long been recognised in Germany and the United States of America, where the highest posts in the State Departments of Mining are filled by accomplished geologists. It is certain that if a mining engineer would rise to the higher branches of his profession he must needs distinguish himself in the domain of geology.

It may not be out of place to mention here that, in addition to the results mentioned above, three mining students—namely, Arthur R. Andrew, J. Allan Thomson, and A. Gadsby Johnson—passed the final examination for the ordinary degree of B.Sc. of the New Zealand University.

Government Examinations under Mining Acts.—Mr. J. Otto Bishop, a late graduate of the school, passed the examination for a first-class mine-manager's certificate, which will be granted on completion of necessary practical work in a mine. The following old students also passed the examination for battery-superintendents' certificates: George S. Orbell, W. Ernest Barron, John

Mackay, G. A. C. Ulrich, and G. A. Gow.

Laboratory. — Mr. Waters reported on fifty-one samples of ore, mostly gold-determinations, and treated two parcels of ore in the experimental plant. The gold-ores of Otago are mostly clean and free-milling, with the result that the experimental plant is seldom used by the public. On the other hand, a small leaching plant is urgently required for the practical demonstration of certain metallurgical processes; and by modifying the present battery on the lines indicated by Mr. Waters such a plant could be constructed at a cost not exceeding £50.

Donations.—The geological collections in the school have been supplemented by a large number of rocks and fossils presented by Dr. Marshall, Mr. Hamilton, and the Director; and during the year Messrs. Smith and Co. (Limited), of Sheffield, forwarded useful exhibits of steel and steelwire ropes. At present Dr. Marshall is greatly hampered by the want of suitable space in which to set out and exhibit his collections. What is much needed is a room in which the characteristic rocks and fossils of the different rock-formations of New Zealand could be exhibited in

their chronological order for purposes of class demonstration.

Old Students of Mining School.—Among the more important positions secured by old students of the Mining School during 1902 were those of Mr. A. Montgomerie, M.A., appointed State Mining Engineer for Western Australia; Mr. F. B. Allen, M.A., B.Sc., Director of Western Australia School of Mines; Mr. O. G. Adams, A.O.S.M., Director of Thames School of Mines; Mr. T. O. Bishop, A.O.S.M., Director of Reefton School of Mines; Mr. W. S. Watt, A.O.S.M., Director of Zeehan School of Mines; Mr. James Maclaren, B.Sc., Special Mining Geologist to Indian Government; Mr. Adam Hay, A.O.S.M., Assistant Engineer to Abyssinia Prospecting Syndicate; and Mr. Norman R. Fisher, B.Sc., M.E., Assistant Surveyor, Dunedin Drainage Board. Besides these, many of our past students have obtained appointments during the year in mining and metallurgical works in New Zealand and Australia.

Conclusion.—I wish, in conclusion, to record my appreciation of the zeal and ability displayed by Mr. Waters and Dr. Marshall in conducting the work of their several departments during the

past year.