UR 1957/9-12



## NOTES ON WEST COAST MINES

All persons making the tour will be interested to read, "The Peaks of Lyell" by G. Blainey, and published by the Melbourne University Press.

## MOUNT LYELL MINING AND RAILWAY COMPANY LTD.

The present Company has functioned since 1903, when the former Mount Lyell Company amalgamated with the North Lyell Copper Co. Ltd. Capital is £5,000,000 in 5,000,000 £1 shares, of which 2,325,000 have been issued.

The Mount Lyell mine was discovered in 1883, and was originally worked by various associations as a gold mine. The former Mount Lyell Company took over the property in 1892, and treatment operations were begun in 1894.

Prior to 1935, underground operations provided the bulk of ore extracted, but since that year the West Lyell Open Cut Mine has been the main ore producer.

Until 1928, the blister copper produced was sent to the works of the Electrolytic Refining and Smelting Company at Port Kembla for refining. This material is now electrolytically refined at Queenstown in the Company's own plant, which commenced operations in May, 1928, and which produces cathode copper of the highest grade. The greater portion of cathode output is sent to Port Kembla to be made into commercial wire bars and other shapes, and the balance is sent to the Austral Bronze Company at Hobart, for making copper and non-ferrous strips, mainly brasses and bronzes. Residues from the electrolytic process, containing the silver and gold contents of the blister copper, are sent to Port Kembla to recover the precious metals.

The reduction works are situated at Queenstown. Carriage of ore to the concentrating mill is over an electric tramway system, through a tunnel 6,952 feet in length. Treatment of the ore is carried on at a rate of over 4,500 tons per day. From the mill residues, pyrites concentrate is recovered and shipped from Strahan to the mainland for sulphuric acid manufacture.

The main motive power is electricity, and a hydro-electric installation utilises water power available from Lake Margaret, seven miles from the works. (Lake Margaret, with an annual rainfall of 146 inches, is the wettest part of Tasmana). This installation was completed during 1914, and has a capacity of 8,000 horsepower. A supplementary power station was later installed on the Yolande River. Additional power needed is purchased from the Hydro-Electric Commission.

The Company owns and operates a 3 ft. 6 inch gauge railway from the Queenstown reduction works to Regatta Point, opposite Strahan, and has adequate wharf facilities. The line is 21½ miles long. Total number of persons employed in all sections of the Company is about 1,500.

From the inception of operations to 31st December, 1955, output has totalled:-

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| Copper | 482,273 tons. |
| Silver | 15,663,910 ounces. |
| Gold | 541,507 ounces. |

## Exploration in the South West of Tasmania

The Electrolytic Zinc Co. of Australasia Ltd. and the Mount Lyell Mining and Railway Company Ltd. are engaged in a mineral exploration of the area between Queenstown and Port Davey. They have pooled their resources, and will share in the expenses of exploration and in the results achieved. A special prospecting licence has recently been issued to them for an area of 2,900 square miles. Under the terms of the licence, £50,000 must be spent on exploration in 1956/57.

The area under survey is uninhabited, and the known minerals in the area are gold, copper and osmiridium. The Mount Lyell Co. is mainly interested in finding an extension of the West Coast copper field. Geophysical prospecting methods are being used, and transport problems are being alleviated by the use of a helicopter.

## ZEEHAN

Zeehan (the town), in the 1890's, had an even greater boom period than Queenstown. Silver was discovered there in the 1880's, and according to the then mining expert of the Hobart "Mercury", the discovery of the field "bids fair to become a rival to the celebrated silver fields of the United States, Mexico and Peru". Rich surface ore was mined and sent by packhorse and dray to Trial Harbour, 12 miles west of Zeehan, for export to Australian and German smelters. Most of the profit from Zeehan's early exports was lost in transport costs. The population of Zeehan rose to a peak of 8,000 in August, 1897, but it was discovered that the silver lodes were shallow, and no payable ore was found below a depth of 600 feet. By 1901, Queenstown had displaced Zeehan as the third largest town in Tasmania, and thereafter the population of Zeehan steadily declined. The decline was hastened following the formation of the Electrolytic Zinc Company of Australasia Ltd. in 1920.

To-day there are only six mining companies producing ore on the West Coast. They are Mount Lyell, Electrolytic Zinc (Rosebery and Williamsford), Renison Associated Tin (Renison Bell), Mount Farrell (Tullah), and the two Zeehan companies, Montana and Zeehan mines. Fifty years ago, there were more than forty companies producing ore, and another seventy were exploring their leases.

## Iron Ore Deposits on the West Coast

There are four known iron ore deposits on the West Coast. They are Rio Tinto and Rocky River (both between Waratah and Corinna and near the Corinna road), Blythe-Hampshire (near Hampshire), and Mount Agnew (near Zeehan). The presence of these deposits has been known since about 1900, but isolation has retarded their development.

A geophysical survey was carried out last summer by the Bureau of Mineral Resources, at the request of the Department of Mines. The results for the Rio Tinto-Rocky River area indicated the presence of a probable large ore body on known Rio Tinto and Rocky River deposits, and an additional three areas of potential ore ~~body~~ were also disclosed.

Ground surveys by geological parties will be made in the coming summer season, to test the size and grade of the ore bodies, and if satisfactory, a programme of diamond drilling will follow.

## RENISON BELL

Tin was discovered in the Ring River in 1890, leading to the discovery of the pyritic lodes on the Renison Bell leases. Mining has continued there ever since.

## Electrolytic Zinc Company of Australasia Ltd.

During the 1914-18 war, four Broken Hill zinc producers, who were then unable to sell their concentrate to German and Belgian zinc works, formed a new Company. As they had large stocks of unmarketable concentrate on hand, they decided to refine their own zinc. They built zinc works at Risdon, near Hobart, obtained cheap hydro-electricity from the Government, and sold their output of zinc to the British Government under an eight year contract. In 1920, they merged with the Mount Read and Rosebery Mines, and the Electrolytic Zinc Company of Australasia was formed.

The large reserves of zinc ores at Broken Hill and elsewhere on the Australian mainland, and at the Company's Rosebery and Hercules mines on the West Coast of Tasmania ensure a supply of raw materials for many years to come.

A large milling plant for the treatment of zinc sulphide ores and the production of lead, zinc and copper concentrates is in operation at Rosebery. Zinc concentrate produced is railed to Burnie for shipment to Risdon.

To-day, the whole of Australia's requirements of zinc metal are supplied from the Risdon plant, and most of the surplus metal is exported to India and the United Kingdom. Zinc production for the financial year 1955/56 was just over 100,000 tons.

Special community services, managed by elected committees, are well established at Rosebery and Risdon. They include sickness, and accident insurance, death assurance, medical unions, dental services, sporting and recreational activities and community stores.

Prior to the formation of the Company in 1920, the people of Zeehan had urged the Government to assist in establishing zinc works at Zeehan. In 1920, at the time of the merger, it was understood that zinc ore would be railed from Rosebery and Williamsford to the site of the Zeehan smelters, where a grinding and flotation plant would prepare a zinc concentrate for shipment to Hobart. These plans, however, did not mature, and with the erection of the plant at Rosebery, Zeehan became "melancholy ghost town, living on its memories".

Zinc cons. were previously railed to Zeehan for removal of the sulphur content prior to transport to Risdon

The Mt. Read and Rosebery lead-zinc ore bodies were discovered in 1891 and 1893 and worked intermittently until the present Company took over. Treatment was not successful until the flotation process was applied by them, the Tasmanian Metals Extraction Co. at Rosebery and the Zeehan smelters having failed in their methods around 1913.

Exploration in the North West of Tasmania

The Rio Tinto (Aust.) Pty. Ltd. and the Electrolytic Zinc Company of Australasia Ltd. are sharing in a mineral exploration of the North West region. A special prospecting licence has been issued for an area of 3,900 square miles. The area is north of Queenstown, and west of a line approximately joining Queenstown and Wynyard.

Airborne geophysical survey methods are being used, including aerial electro-magnetic work which has previously been used only in Canada. The Companies are interested in ore bodies of any useful metal that can be worked on a large scale. Under the terms of the licence, at least £150,000 must be spent on preliminary exploration in 1956/57.

WARATAH - MOUNT BISCHOFF AREA

In 1871, "Philosopher" James Smith discovered a mountain of tin at Mount Bischoff. This discovery of the richest tin mine in the world marked the beginning of the tremendous rise in West Coast mining development. Until the Burnie-Waratah railway was opened in 1884, the rich ore was carted by bullock teams to Burnie and shipped to Launceston. This railway now terminates at Guildford, 11 miles from Waratah, before proceeding to other West Coast centres. By 1888, the Mount Bischoff Tin Mine, financed with a paid-up capital of £29,600 had paid almost £1,000,000 in dividends, and by 1897, it had paid £1,500,000 in dividends. The population of Waratah at that time was about 2,000.

The population of Waratah at 30th June, 1954, was 320, and Census publications showed that only 17 persons were engaged in mining activity on that date.

In 1955, 37 tons of metallic ore valued at £stg. 28,176 were mined in the Mount Bischoff-Waratah area. Of this total, 32.729 tons valued at £stg. 24,935 were extracted by the Mount Bischoff Tin Mine. Employment by the mine during the year averaged 16, of whom 8 worked underground.

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