

V. MINERALS OTHER THAN GOLD.

COPPER.

The sudden and severe fall in the market prices of the industrial metals has proved disconcerting to forecasts and projects based upon values that have been found to be unnatural and unstable, and has acted prejudicially to the continuation of the development of several of the copper-mines which had been reopened during the late era of high prices.

At Whangaroa operations are still carried on at two properties, at one of which—viz., the Northern Mine—underground developments have disclosed an improvement in width of formation and values.

Near Woodville the old Maharahara Mine, which was recently reopened by an Auckland company, has been for the third time in its history closed down, protection having been granted. The mining operations at this mine consist of two drives in the eastern slope of the Ruahine Ranges, distant from Woodville about nine miles by road. These drives, which have a difference in level of about 300 ft., both intersect a large lode of siliceous hæmatite containing copper-ore in pockets in the form of chalcopyrite and other sulphides, but not apparently in sufficient quantity to be payable. A shipment of this ore was exported for treatment, and £2,138 was reported to have been spent upon the property during the year.

In the South Island the Maoriland Copper Company, near Nelson, have carried out a considerable amount of development-work on their United, Monster, and Champion Mines. Pumping and sawmill plants have been erected, and there is every appearance that systematic work is intended.

SCHEELITE.

An increase of £12,079 in the export of scheelite has to be recorded for the year, the concentrates from this valuable ore finding a ready and improving market in Europe.

Induced by the success attending the operations of Messrs. W. and G. Donaldson, of Macrae's Flat, Otago, and Messrs. Reid and party at Glenorchy, Lake Wakatipu, together with the high price ruling for tungstic acid, which is extracted from the concentrates of this mineral, a number of scheelite-mining leases have been recently taken up in Otago.

Milling and concentrating plants have been installed at Macrae's, Otago, and at Glenorchy, Lake Wakatipu, and there is every reason to believe that scheelite-mining will shortly become an important industry in the Dominion.

This mineral occurs commonly in mica schist and altered sedimentary rocks. At Macrae's it is found in bunches and stringers through the quartz.

At the Lake Wakatipu Mine the concentrates amount to about 4 per cent. of the ore milled.

The uses of tungstic acid are various. It is used as a mordant in calico-printing, as a constituent in some finer grades of paint, and renders clothing non-inflammable. Its greatest use, however, is in the manufacture of steel of the very highest grades, such as engineers' tool steel for turning-lathes, and steel for the inner tubes of big guns. Its characteristics are great density, toughness, and hardness. Such steel is placed on the market by different makers under a variety of names—nickel tungsten steel, high-speed steel, self-hardening steel, &c. It has within the last few years revolutionised engineering methods. A 1 in. lathe operating on mild steel has removed as much as 7½ cwt. of parings per hour. The lathe may be driven at a speed so great that it becomes glowing hot, yet it does not lose its temper, and is therefore an ideal tool-steel. Turning-work can now be done at less than half the former price, and work which formerly was done at the forge is now done with this steel in the same time that it would take to heat the iron. The steel would be more largely employed but for the fact that the old style of lathe is not strong enough or high enough in speed to make the best uses of it. There is an increasing demand for scheelite, and the future of these mines may be looked forward to with confidence.

ANTIMONY.

At the Alexandra South Antimony Mine winding and pumping machinery has been erected by a syndicate, and it is reported that a company has recently been promoted to work this property. At this mine a small antimony-bearing lode is enclosed in a mica-schist country rock, the matrix of the ore being quartz, in which the antimonite occurs as short irregular bands. The lode outcrops at two points—viz., on the right bank of the Clutha River, about 15 chains above Alexandra Bridge, also at a point about 15 chains further along the road to Clyde. The strike of the vein is about N.N.E. and S.S.W., underlaying to the W.N.W. at an angle of about 45°.

In the North Island nothing of importance has to be recorded in the development of this mineral.

On the West Coast prospecting operations have been carried out at Resolution Bay, Preservation Inlet, and Murray Creek, near Reefton, but no plants have been installed, and it is premature to express an opinion as to the prospects.

CINNABAR.

During the past year very little has been done as regards prospecting for or the development of cinnabar-bearing veins.

In Otago prospecting operations have revealed the presence of this mineral in lode formation on the ranges between the Nokomai and Nevis Rivers. In many of the alluvial deposits of Otago and Southland cinnabar in the form of grains is of frequent occurrence.

IRON.

The hæmatite-deposits at Parapara, near Collingwood, remain unworked, the present depressed state of the mining market in London being considered inopportune for the promotion of a company to operate the same.