

The Glenorchy Mine produced 63 tons, valued at £6,080, and the Golden Point Mine (Macrae's, Otago) produced 20 tons, valued at about £1,800.

The Dominion Consolidated Developing Company, near Wakamarina, Marlborough, produced scheelite to the value of £225.

During 1911 there was a marked decrease in the production of tungsten throughout the world, due largely to the lack of a wide market for tool-steel, in which tungsten finds its chief use. In the United States there was produced 1,125 short tons of 60 per cent. concentrates, which compares with 1,821 tons marketed in 1910. In New South Wales the output declined from 150.6 to 108.45 tons over the same period. During 1911 the prices varied from 18s. 9d. to £1 15s. 5d. per unit, depending upon quality, quantity, and individual bargaining. At the close of the year £1 0s. 10d. per unit was offered.

In Canada, the United States, and New South Wales scheelite is found in pockets, from which the ore is gouged. In New Zealand, especially in the Macrae's district, well-defined scheelite-quartz reefs of varying thickness have been discovered, and the scheelite is generally associated with gold; but where the finest deposits occur gold is scarce.

During the year the Highlay Tungsten Mine, which was developed and successfully operated for several years by Messrs. Donaldson Bros. (the pioneers of the scheelite industry in this Dominion), was sold to a Christchurch syndicate, who have since carried out operations on a larger scale.

Owing to the activity now being displayed in the development of scheelite-producing mines, a considerable increase in the production of scheelite may be anticipated, unless the market-price continues to fall.

IRON.

With the exception of a few men employed putting in short drives to ascertain the thickness of limonite at Parapara, little or no development was carried out on any of the ironstone leases. During the current year an experimental plant was installed at Moturoa, Taranaki, for the Paparoa Iron Company for the treatment of the black-sand from the sea-beach. The plant consisted of a small blast-furnace equipped with a Root's blower driven by gas-engine, also a small briquette plant which was to be used in the preparation for the furnace of the iron-sand mixed with clay as a bond and flux.

KAURI-GUM.

The quantity of kauri-gum exported during the year amounted to 7,587 tons, valued at £395,707, as compared with 8,693 tons, valued at £465,044, in 1910. The total production of this fossil resin to the end of 1911 amounted to 314,087 tons, valued at £15,809,152.

The market price for this mineral continues to decline slowly, and as the demand for general labour in New Zealand increases, the occupation of gum-digging upon the barren country north of Auckland becomes less attractive, and but few men are now so occupied in comparison with the number engaged during former years.

PETROLEUM.

The development of the oilfields in the Taranaki, Lake Brunner, and Poverty Bay districts has been energetically pursued, but the evidence obtained has not yet been conclusive that petroleum exists in sufficient quantity to be remunerative. The most promising developments have been obtained upon the areas at Moturoa, controlled by the Taranaki Petroleum Company (Limited). In addition to the flowing wells Nos. 2 and 3 (3,030 ft. and 3,797 ft. deep respectively), at No. 5 well (2,280 ft.) oil was tapped in the early part of the current year, and from the quantity already yielded by it, this appears to be the most productive well hitherto drilled.

On the 3rd May, 1911, I gauged the oil won by this company and found that 266,392 gallons of crude petroleum, containing an average of 97 per cent. of distilled oils, had then been impounded. The company thus succeeded in winning the bonus of £2,500 offered by the Government for the first quarter million gallons of crude petroleum of specified quality won within the Dominion. On the 25th March, 1912, the quantity of oil won was again gauged by me, and it was found to have increased by 155,583 gallons, the yield having averaged for 325 days 479 gallons per day, equivalent to 11½ barrels. This oil was produced by wells Nos. 2, 3, and 5, but the latter well only became productive a few weeks before the last official gauging took place. Between the date of my last gauging on the 25th March and the 16th May, 1912, from all three wells 39,653 gallons was yielded, which represents an average of 18 barrels per day.

This company has recently been refloated in New Zealand and renamed the Taranaki Oil-wells (Limited), with a capital of £400,000, 275,000 shares of £1 each at par being subscribed for. The proposed operations consist of the erection of a refinery, drilling additional wells, and the conversion of a small local industry into a modern oilfield business, with head offices in London.

The above development is extremely satisfactory, but before a profitable oilfield business may be established it will be necessary to prove that oil in large quantity exists. Hitherto the development has proved that oil of excellent quality exists in moderate quantity; but there is reasonable possibility that an increased supply will be tapped.

Drilling operations by the Kotuku Oilfield Syndicate, near Lake Brunner, have not been so successful. At a site selected by Dr. J. Wanner, an oil geologist, and recommended by the Geological Survey Department,* a hole was drilled during the year through rocks of Miocene age to a depth of 952 ft., at which depth primary rocks were reached, and drilling was discontinued, as any further attempt to secure oil at that locality would be futile. Small but regular quantities of petroleum are still yielded along the banks of Deep Creek, within the territory of this syndicate.

Oil-drilling operations during the year by the New Zealand Oilfields (Limited) at Poverty Bay have not produced successful results.

From the foregoing it will be seen that the oil industry in New Zealand is still in the exploration stage.

* Bulletin No. 13, "The Geology of the Greymouth Subdivision," by P. G. Morgan, Director, pages 148-149.