

CARBONIZING AND BRIQUETTING.

The low-temperature coal-carbonizing and briquetting plant of Waikato Carbonization, Ltd., at Rotowaro, operated for eight months during 1935.

The following figures show the production during that period :—

Total amount of raw coal to bunkers	..	21,992 tons.
Total amount of raw coal carbonized	..	20,805 tons.
Coke produced		10,058 tons.
Percentage of coke to raw coal	..	48.570
Carbonettes produced	..	10,500 tons.
Tar treated		210,777 gals.
Pitch made		397.48 tons.
Oil produced (light oil, 20,000 gallons ; heavy oil, 80,000 gallons)		100,000 gals.

I am of the opinion that plants of this nature should be encouraged, as they are a potent factor in helping to solve the slack problem.

LABORATORY INVESTIGATIONS.

The Dominion Laboratory has, as in past years, carried out the testing and analysis of mineral samples and mine gases. Prospectors' samples from all parts of the Dominion have been examined for gold and silver and occasionally for other metals. Among the samples of mine airs forwarded by the inspection staff of the Mines Department a number were taken for the purpose of checking the readings given by a McLuckie gas-indicator.

The experiments undertaken by the Department in co-operation with the Laboratory with a view to determining the effect of storage on swelling properties of various coals were completed. It had been suggested that the swelling might be reduced after exposure to the air, thus rendering the coal more suitable for use in continuous vertical gas-retorts.

From this point of view the results were disappointing, as very little if any alteration in the swelling properties of the coals tested was detected after eight months exposure to the weather.

During the year consideration has been given to the possible exploitation of cinnabar and asbestos, but so far no actual experiments have been made.

Progress in coal research and utilization abroad is being closely followed, and during his recent visit to Great Britain, Mr. W. A. Joiner, the Fuel Chemist of the Laboratory, had the opportunity of spending a month at H.M. Fuel Research Station and of visiting the new coal-hydrogenation plant erected by Imperial Chemical Industries, Ltd., at Billingham, this company's coal-testing laboratories at Winnington, the Safety in Mines Research Stations at Buxton and Sheffield, and other places of interest in connection with the utilization of coal. In this way it has been possible to make direct contact with those engaged in fuel investigational work in Great Britain, and to gain some first-hand knowledge of the advances being made.

PERSONS EMPLOYED IN OR ABOUT MINES AND STONE-QUARRIES.

The following table shows the number of persons employed in each inspection district during 1935 and 1934 :—

Classification.	Inspection District.			Totals.		
	Northern (North Island).	West Coast (of South Island).	Southern (rest of South Island).	1935.	1934.	Increase or Decrease.
Gold, silver, and tungsten ore	1,217	3,486	2,038	6,741	6,540	Inc. 201
Coal	1,433	1,844	954	4,231	4,478	Dec. 247
Stone-quarries under the Stone- quarries Act	1,486	124	392	2,002	1,818	Inc. 184
Oil	4	..	..	4	10	Dec. 6
Cinnabar	5	..	..	5	2	Inc. 3
Totals	4,145	5,454	3,384	12,983	12,848	Inc. 135