



2020–2021 Minerals Yearbook

NEW ZEALAND [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF NEW ZEALAND

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In 2021, New Zealand was the 5th-ranked producer of natural zeolites in the world, accounting for 10% of world production; the 10th-ranked producer of perlite, accounting for less than 1% of world production; and the 13th-ranked producer of diatomite, accounting for 1.6% of world production. The country also produced other mineral commodities, such as aluminum (primary), cement, coal, gold, iron ore, silver, and steel (New Zealand Petroleum and Minerals, 2022, p. 1; Crangle, 2023; Simmons, 2023; Williams, 2023).

In 2020 and 2021, the production of mineral commodities represented only a minor part of the economy of New Zealand. The real gross domestic product (GDP) decreased by 2.1% in 2020 and increased by 5.6% in 2021. The country's nominal GDP was \$211 billion in 2020 and \$247 billion in 2021. In 2020, the output of mining-related industries accounted for 4.1% of the GDP, including petroleum and related products manufacturing, 1.6%; metal products manufacturing, 1.1%; mining, 1.0%; and nonmetallic mineral products manufacturing, 0.4%. In 2021, the output of mining-related industries accounted for 3.7% of the GDP, including petroleum and related products manufacturing, 1.5%; metal products manufacturing, 1.0%; mining, 0.9%; and nonmetallic mineral products manufacturing, 0.4%. The average number of employed people in the mining sector was 5,430 in 2020 and 5,480 in 2021, accounting for approximately 0.24% of the total employment in the country. Exports of coal, crude petroleum and ores, natural gases, and other minerals accounted for 3.2% of the country's total goods exports in 2020, which were valued at \$32.1 billion,¹ and 2.8% of the total goods exports in 2021, which were valued at \$36.4 billion (Statistics New Zealand, 2021, p. 15; 2022a; 2022b, p. 15; 2022c, p. 5, 6; International Monetary Fund, 2022).

The legislative framework for the mineral sector in New Zealand is provided by the Crown Minerals Act 1991 as amended by the Crown Mineral Amendment Act 2013. In November, the Government initiated new measures to strengthen fuel supply resiliency. After the review of the Ministry of Business, Innovation and Employment's fuel resiliency policy, Marsden Point Oil Refinery transited to an import terminal (New Zealand Petroleum and Minerals, 2017; Findlay, 2022).

In 2020, New Zealand's commodities for which output decreased by 10% or more included bituminous coal, for which output decreased by 77%; dimension stone (unspecified), 72%; silver (mine, Ag content), 66%; crushed limestone for industrial use, 49%; gold (mine, Au content), 29%; petroleum refinery, 28%; sand and gravel for road and ballast, 17%; raw steel, 12%; and crude petroleum, 10%. These decreases were a result of low demand owing to the effects of the coronavirus disease 2019 (COVID-19) pandemic. Industrial sand and gravel (other) production increased by 19%. In 2021, commodities for which output decreased by

10% or more included industrial sand and gravel (other), 79%; limestone for agriculture, 49%; sand and gravel for road and ballast, 24%; natural gas (marketable) and crude petroleum, 13% each; and natural gas (gross), 12%. In 2021, New Zealand's commodities for which output increased by 10% or more included dimension stone (unspecified), 46 times; bituminous coal, 248%; silver (mine, Ag content), 119%; sand and gravel for building aggregate, 42%; crushed limestone for industrial use, 24%; pig iron, 13%; and raw steel and metallurgical coke, 10% each. Data on mineral production are in table 1. Table 2 is a list of major mineral industry facilities. More-extensive coverage of the mineral industry of New Zealand can be found in previous editions of the U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Asia and the Pacific, which are available at <https://www.usgs.gov/centers/national-minerals-information-center/asia-and-pacific>.

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¹Where necessary, values have been converted from New Zealand dollars (NZD) to U.S. dollars (US\$) at the annual average exchange rates of NZD1.414=US\$1.00 for 2021 and NZD1.542=US\$1.00 for 2020.

TABLE 1
NEW ZEALAND: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²	2017	2018	2019	2020	2021
METALS					
Aluminum, primary, metal	337,000	341,000	351,000	333,000	333,000
Gold, mine, Au content kilograms	10,288	10,045	8,217	5,860	5,815
Iron ore, mine, iron sand, titaniferous magnetite:					
Gross weight thousand metric tons	4,008	4,000 ^c	4,000 ^c	4,000 ^c	3,960 ^c
Fe content do.	2,280	2,270 ^c	2,270 ^c	2,270 ^c	2,260 ^c
Iron and steel:					
Pig iron do.	683	679	672	613	693
Raw steel do.	657	652	667	586	646
Silver, mine, Ag content kilograms	8,022	6,332	4,060	1,393	3,055
INDUSTRIAL MINERALS					
Cement, hydraulic ^c thousand metric tons	360	450	1,000 ^r	950	1,000
Clay:					
Common clay, for brick and tile manufacture	4,299	4,000 ^c	4,000 ^c	4,000 ^c	4,000 ^c
Kaolin, pottery	50,454	51,369	50,569 ^r	51,000 ^c	51,000 ^c
Diatomite, diatomaceous earth ^c	40,000	40,000	40,000	40,000	40,000
Lime ^c	180,000	180,000	180,000	170,000	180,000
Nitrogen, ammonia, N content	120,000	130,000	110,000	110,000	110,000
Perlite ^c	17,000	17,000	17,000	17,000	18,000
Pumice and related materials	91,861	223,888	NA ^r	37,034	37,000 ^c
Sand and gravel, industrial:					
Silica	53,165	53,200 ^{r,c}	34,320 ^r	34,000 ^c	34,000 ^c
Other thousand metric tons	2,262	1,566	1,096 ^r	1,300	269
Stone, sand, and gravel, construction:					
Sand and gravel:					
For building aggregate do.	9,671	9,502	5,810 ^r	6,054	8,605
For roads and ballast do.	19,076	22,072	24,317	20,297	15,412
Stone:					
Crushed:					
Dolomite:					
For agriculture	24,679	25,297	20,000 ^c	20,000 ^c	20,000 ^c
For industrial uses	--	41,484	40,000 ^c	40,000 ^c	40,000 ^c
Limestone, including marl:					
For agriculture thousand metric tons	1,536	1,254	997	987	503
For cement do.	600	--	1,281	1,220 ^c	1,280 ^c
For industrial use do.	791	2,117	805	409	508
Dimension, unspecified	162,465	16,745	38,212	10,617	494,443
Zeolites	100,000	100,000 ^c	100,000 ^c	100,000 ^c	100,000 ^c
MINERAL FUELS AND RELATED MATERIALS					
Coal:					
Bituminous thousand metric tons	61	66	90	21	73
Lignite do.	319	307	289	298	285
Metallurgical do.	1,152	1,261	1,201	1,108	1,184
Subbituminous do.	1,387	1,577	1,455	1,392	1,326
Total do.	2,920	3,210	3,040	2,820	2,870
Coke, metallurgical do.	509	486	425	407	446
Natural gas:					
Gross million cubic meters	5,412	4,614	4,851	4,737	4,146
Marketable do.	4,757	4,109	4,426	4,374	3,824
Petroleum:					
Crude thousand 42-gallon barrels	11,281	8,788	8,813	7,902	6,854
Refinery do.	39,474	40,273	41,254	29,576	29,437

^cEstimated. ^rRevised. do. Ditto. NA Not available. -- Zero.

¹Table includes data available through December 12, 2022. All data are reported unless otherwise noted. Totals and estimated data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, salt and steel products may have been produced, but available information was inadequate to make reliable estimates of output.

TABLE 2
NEW ZEALAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities ¹	Annual capacity ^c
Aluminum		New Zealand Aluminium Smelters Ltd. (NZAS) (Rio Tinto Group, 79.36%, and Sumitomo Chemical Co., 20.64%)	Tiwai Point smelter, Invercargill, Southland	350
Cement		Golden Bay Cement (Fletcher Building Ltd., 100%)	Whangarei plant, Northland	1,000
Clay, kaolin		Imerys Ceramics New Zealand Ltd. (Imerys S.A.)	Mahimahi Quarry, Kaeo, Northland; Matauri Bay Quarry and processing plant, Matauri Bay, Northland	50
Coal		Birchfield Coal Mines Ltd.	Giles Creek Mine, Cronadun, West Coast	200
Do.		Bathurst Resources Ltd.	Takitimu Mine, Nightcaps, Southland	220
Do.		BT Mining Ltd. (Bathurst Resources Ltd., 65%, and Talley's Energy Ltd., 35%)	Maramarua Mine, Kopuku, Waikato	250
Do.		do.	Rotowaro Mine, Rotowaro, Waikato	490
Do.		do.	Stockton Mine, Stockton, West Coast	910
Do.		Crusader Coal Ltd.	Mine in Reefton, West Coast	45
Do.		Kai Point Coal Co. Ltd.	Kai Point Mine, Kaitangata, Otago	55
Do.		L&M Energy Ltd. (Greenbriar Ltd., 100%)	Ohai Mine, Ohai, Southland ²	200
Do.		New Vale Ohai Coal (Greenbriar Ltd., 100%)	New Vale Mine, Waitane, Southland ²	300
Do.		New Zealand Coal & Carbon Ltd., which includes— Francis Mining Co. Ltd.	Echo Mine, Reefton, West Coast	70
Do.		Roa Mining Co. Ltd.	Rajah Mine, Greymouth, West Coast	NA
Do.		R.J. Banks & Co.	Burkes Creek Mine, Reefton, West Coast	5
Do.		Solid Energy New Zealand Ltd.	Strongman Mine, Nine Mile, West Coast	100
Gold, mine, Au content	kilograms	OceanaGold Corp.	Waihi operation (Correnso, Favona, Martha, and Trio underground mines), Waihi, Waikato	870
Do.	do.	do.	Macraes operation (Coronation, Deepdell, and Frasers open pits and Frasers and Golden Points underground mines), Macraes, Otago	4,100
Iron ore, mine, iron sand, Fe content		Waikato North Head Mining Ltd. (New Zealand Steel Ltd., 100%)	Waikato North Head Mine, Otatau, Waikato	1,200
Do.		Taharoa Ironsands Ltd. (Taharoa C Block Inc., 100%)	Taharoa Mine, Taharoa, Waikato	1,400
Natural gas	million cubic meters	Beach Energy Ltd. (operator), 50%; Genesis Energy Ltd., 46%; New Zealand Oil and Gas Ltd., 4%	Kupe Field (Block 174E39/25), 30 km southwest offshore from Hawera	630
Do.	do.	Greymouth Petroleum Ltd.	Turangi Field (Block 174E39/2), Motunui, Taranaki	450
Do.	do.	OMV New Zealand Ltd.	Maui Field (Block 173E39/26), 35 km southwest offshore from New Plymouth	760
Do.	do.	OMC New Zealand Ltd., 74%, and Todd Energy Ltd., 26%	Pohokura Field (Block 174E38/32), 25 km northeast offshore from New Plymouth	920
Do.	do.	Todd Energy Ltd.	Mckee-Mangahewa Field (Block 174E39/2), Tikorangi, Taranaki	960
Do.	do.	do.	Kapuni Field, Taranaki	320
Perlite		Blue Pacific Minerals Ltd.	Quarries in Ngakuru	18

See footnotes at end of table.

TABLE 2—Continued
NEW ZEALAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities ¹	Annual capacity ^e
Petroleum:				
Crude	thousand 42-gallon barrels	Beach Energy Ltd. (operator), 50%; Genesis Energy Ltd., 46%; New Zealand Oil and Gas Ltd., 4%	Kupe Field (Block 174E39/25), 30 km southwest offshore from Hawera	640
Do.	do.	Greymouth Petroleum Ltd.	Turangi Field (Block 174E39/2), Motunui, Taranaki	570
Do.	do.	OMV New Zealand Ltd., 100%	Maui Field (Block 173E39/26), 35 km southwest offshore from New Plymouth	1,060
Do.	do.	OMV New Zealand Ltd., 69%; Horizon Oil (New Zealand) Ltd., 26%; New Zealand Oil and Gas Ltd., 5%	Maari Field (Block 173E39/32), Tasman Sea	1,760
Do.	do.	OMV New Zealand Ltd., 74%, and Todd Energy Ltd., 26%	Pohokura Field (Block 174E38/32), 25 km northeast offshore from New Plymouth	1,150
Do.	do.	Tamarind Resources Pte Ltd.	Cheal Field (Block 174E39/14), Stratford, Taranaki	280
Do.	do.	Todd Energy Ltd., 100%	Mckee-Mangahewa Field (Block 174E39/2), Tikorangi, Taranaki	820
Do.	do.	do.	Kapuni Field (Blocks 174E19/13, 14, 19, and 20), Kapuni, Taranaki	290
Refinery	do.	New Zealand Refining Co. Ltd.	Marsden Point oil refinery, Marsden Point, Northland	41,000
Salt		Dominion Salt Ltd.	Salterns in Lake Grassmere, Marlborough	100
Silver, mine, Ag content	kilograms	OceanaGold Corp.	Waihi operation (Correnso, Favona, Martha, Trio underground mines), Waihi, Waikato	3,100
Steel:				
Raw		New Zealand Steel Ltd. (BlueScope Steel Ltd., 100%)	Glenbrook mill, Glenbrook, Auckland	650
Products		Pacific Steel Group Ltd. (BlueScope Steel Ltd., 100%)	Otahuhu mill, Auckland	380
Zeolites		Blue Pacific Minerals Ltd.	Quarries in Ngakuru	100

^eEstimated. Do., do. Ditto. NA Not available.

¹Abbreviations used for units of measure in this table are as follows: km—kilometers.

²Operation closed in 2021.