



2022 Minerals Yearbook

CUBA [ADVANCE RELEASE]

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World rankings for mineral production, shares of world production, and reserves presented in this chapter are derived from the referenced sources. Production data in this chapter may differ from data in other sources because of differences in the date of reporting.

THE MINERAL INDUSTRY OF CUBA

By Yadira Soto-Viruet

In 2022, Cuba was estimated to rank fourth among the world's leading producers of zeolites (accounting for about 9% of world production) and sixth among the world's leading producers of cobalt (accounting for about 2% of world production). Other nonfuel mineral commodities produced in the country included bentonite, cement, feldspar, gypsum, kaolin, lead, lime, limestone, marble, salt, silica sand, raw steel, sulfuric acid, volcanic ash, and zinc. Cuba also produced mineral fuels, such as crude petroleum, natural gas, and petroleum refinery products. Other identified mineral resources in Cuba included chromium, copper, gold, iron ore, manganese, silver, and tungsten, as well as industrial minerals, such as asbestos, barite, basalt, clay, gabbro, garnet, graphite, kyanite, magnesite, mica, olivine, phosphate rock, quartz, quartz sand, quartzite, and semiprecious stones (table 1; Ministerio del Comercio Exterior y la Inversión Extranjera, 2022, p. 271; Ewing, 2024; Williams, 2024).

The country's economic activity was beginning to recover after the negative effects caused by the coronavirus disease 2019 (COVID-19) pandemic. However, on September 27, Cuba's economic growth was suddenly and negatively affected by Hurricane Ian—a storm that made landfall as a Category 3 hurricane in western Cuba. The storm caused widespread rainfall and flooding, the loss of life and loss of electrical power throughout the country, and damage to or destruction of basic infrastructure. All these factors negatively affected most economic activities in Cuba, including those of the agricultural and fisheries sector. Cuba's slow economic growth throughout the year was also in part attributed to the prevailing socioeconomic and political crisis in Venezuela—a country that continued to be one of Cuba's main trading partners (Economic Commission for Latin America and the Caribbean, 2022, p. 1; Welle, 2022; Bucci and others, 2023, p. 3, 6; Oficina Nacional de Estadística e Información, 2023d, p. 10).

Minerals in the National Economy

In 2022, Cuba's real gross domestic product (GDP) increased by 1.8% compared with an increase of 1.3% in 2021. The construction sector and industrial manufacturing sector (excluding the sugar industry) made up 8% each of the country's GDP, whereas the mining and quarrying sector made only a minor contribution of about 0.4%. The country employed 22,000 people in the mining and quarrying sector in 2022, which continued to account for less than 1% of the total employment in the country (Oficina Nacional de Estadística e Información, 2023a, p. 10, 13–14; 2023b, p. 11).

Government Policies and Programs

Cuba's mining sector is regulated by the Ley de Minas [Mining law] (law No. 76 of 1994), which established

the country's mining policy and legal regulations for the development of mineral resources. The Ministerio de Energía y Minas [Ministry of Energy and Mines] (created by Law Decree No. 301 of 2012) was the entity responsible for establishing Government policies for the energy and mining sectors. The Ley de Inversión Extranjera [Law of Foreign Investment] (law No. 118 of 2014) established the legal framework for foreign investment in the country. The Government-owned Unión Cuba Petróleo (CUPET) is responsible for exploring for, producing, refining, and marketing the country's petroleum and refinery products (Ministerio del Comercio Exterior y la Inversión Extranjera, 2022, p. 15, 221, 271).

Production

In 2022, estimated lead production in the country increased by 14% to 33,000 metric tons (t) from 29,000 t in 2021, and estimated zinc production increased by 16% to 52,000 t from 45,000 t in 2021. The increases in estimated lead and zinc production continued to be attributed to the increase in production at the Castellanos Mine, which was owned by Empresa Minera del Caribe Santa Lucía S.A. (Emincar), the only producer of lead and zinc in the country. During the year, the production of raw steel decreased by 13% to 200,000 t from 231,000 t (revised) in 2021. The industrial minerals for which output decreased by more than 10% were led by feldspar and marble (production decreased by 67% each), kaolin (64%), silica sand (53%), bentonite (44%), gypsum (38%), calcareous sand and other unspecified crushed stone (33% each), lime (27%), and cement (17%) (Oficina Nacional de Estadística e Información, 2023c). Data on mineral production are in table 1.

Structure of the Mineral Industry

Most mining operations in Cuba were Government owned or were joint ventures with the Government. Nickel and cobalt were produced in the country by Government-owned Empresa de Níquel Comandante Ernesto Che Guevara and by Moa Nickel S.A., which was a joint venture between the Government and Sherritt International Corp. of Canada (Sherritt) (50% each). Lead and zinc were produced by Emincar, a joint venture between Government-owned Geominera S.A. (51%) and Trafigura Group Pte. Ltd. of Singapore (49%). Petroleum refinery products were produced by CUPET at the Camilo Cienfuegos, the Hermanos Díaz, the Níco López, and the Sergio Soto refineries. Camilo Cienfuegos was the largest refinery in the country and had the capacity to produce about 23.7 million barrels per year of petroleum products. Table 2 is a list of major mineral facilities.

Mineral Trade

In 2022, the total value of Cuba's exports increased to about \$86.8 million¹ from \$78.6 million in 2021 and the total value of imports increased to about \$393.3 million from \$337.2 million in 2021. During the year, mining products accounted for about 44% of Cuba's total exports. Canada continued to be Cuba's major export partner, receiving 34% of the country's total exports (by value) in 2022; followed by China (19%) and Spain (16%). Venezuela supplied 20% of Cuba's total imports, by value, in 2022 (Oficina Nacional de Estadística e Información, 2023d, p. 8–17).

Commodity Review

Metals

Cobalt and Nickel.—Moa Nickel continued to mine lateritic ore by open pit methods and process it into mixed sulfide precipitate (MSP) that contains nickel and cobalt at its facilities in Holguin Province. The MSP was transported by ocean freight to Canada and then by rail to Sherritt's refining facilities in Fort Saskatchewan, Alberta, Canada, to produce cobalt and nickel. As of 2022, Moa Nickel's mined ore came from the Camarioca Norte, Camarioca Sur, Cantarrana, La Delta, Moa Occidental, Moa Oriental, Playa la Vaca-Zona Septentrional II, Santa Teresita, and Yagrumaje Oeste mining concessions, which together cover a total area of 12,100 hectares. As of December 31, total proven and probable mineral reserves at Moa Nickel were reported to be 116.0 million metric tons (Mt) at average grades of 1.01% nickel and 0.12% cobalt. In 2022, Sherritt's total reported production of refined nickel and cobalt from imported MSP from Cuba was 32,268 t and 3,368 t, respectively, compared with 31,184 t and 3,526 t, respectively, in 2021. The company also reported that it planned to produce between 30,000 and 32,000 t of refined nickel and between 3,100 and 3,400 t of cobalt from imported MSP from the Moa Mine in 2023 (Sherritt International Corp., 2022, p. 9; 2023a, p. 3, 6, 20, 77; 2023b, p. 37).

During the year, Sherritt continued with its expansion program at Moa Nickel at an investment cost of about \$77 million. The expansion program, which was expected to be completed by 2024, included the expansion of the Moa processing plant, the construction of a new slurry preparation plant, and the construction of additional acid storage at the site. The company reported that the expansion program would increase Moa Nickel's MSP production by up to 20%, which would result in roughly 6,500 t of additional contained nickel and cobalt, as well as extend the life of the mine beyond the year 2040 (Sherritt International Corp., 2023a, p. 3, 7, 10–11, 77).

¹Where necessary, values have been converted from Cuban pesos (CUP) to U.S. dollars (US\$) at the annual average exchange rate of CUP25.00=US\$1.00 for 2022 and 2021.

Industrial Minerals

Cement.—As of yearend, Empresa de Cemento Siguaney restarted all operations at its Siguaney cement plant, located in Sancti Spiritus Province. The production of cement was suspended for about 7 months owing to technical issues with the plant's kiln. The repair of the kiln was completed by using imported refractory bricks (OnCuba News, 2022; Global Cement staff, 2023).

Outlook

Cuba's GDP for 2023 was forecasted to increase by about 1.8% (Economic Commission for Latin America and the Caribbean, 2023, p. 3). The expected slowdown in economic growth was partly attributed to a decrease in economic activity globally and among Cuba's main trading partners. The country is likely to continue to be heavily reliant on imports, such as food and fuel, in 2023. The mining and quarrying sector is expected to continue to be a minor contributor to Cuba's economy, mostly from the production of nickel and cobalt. Cuba is expected to continue with efforts to seek foreign direct investment (FDI) to further develop of its nonfuel mineral resources, including copper, gold, lead, silver, and zinc (Economic Commission for Latin America and the Caribbean, 2022; 2023, p. 3).

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TABLE 1
CUBA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²	2018	2019	2020	2021	2022
METALS					
Cobalt, mine, Co content ^c	3,600 ^r	3,800	3,700 ^r	4,000 ^r	3,700
Iron and steel, raw steel	225,000	230,000	185,000	231,000 ^r	200,000
Lead, mine, Pb content ^c	24,000	35,000 ^r	34,000 ^r	29,000 ^r	33,000
Nickel, Ni content:					
Mine, laterite ore	52,200	48,900	49,600 ^r	46,800 ^r	46,200
Intermediate, nickel cobalt sulfide ^c	34,800	37,000	34,800 ^r	34,400 ^r	35,200
Zinc, mine, Zn content ^c	45,000	60,000	60,000	45,000	52,000
INDUSTRIAL MINERALS					
Abrasives, volcanic ash	93,300	38,800	38,800	17,900	17,300
Cement, hydraulic	thousand metric tons	1,590	1,407	1,015	817
Clay:					
Bentonite	630	504	486	517	290
Kaolin	2,700	2,100	2,000	1,400	500
Feldspar, mine	3,000	2,100	14,100	17,800	5,900
Gypsum, mine	thousand metric tons	100	66	62	53
Lime	50,000	40,500	36,900	29,500	21,600
Salt	thousand metric tons	193	210	205	196
Sand and gravel, industrial, silica sand	23,200	19,700	22,500	14,600	6,900
Stone, sand and gravel, construction:					
Sand and gravel, sand, calcareous ³	thousand metric tons	2,800	2,300	3,300	1,800
Stone:					
Crushed:					
Limestone	do.	2,100	800	500	400
Other, unspecified ³	do.	6,900	5,400	6,000	4,500 ^r
Other, size and shape unspecified, marble ³	21,000	16,000	18,000	21,000	7,000
Sulfur, compounds, sulfuric acid	thousand metric tons	945	969	952	853
Zeolites	52,600	120,800	103,300	83,400	77,500
MINERAL FUELS AND RELATED MATERIALS					
Natural gas, marketable	thousand cubic meters	970,100	951,100	894,800	863,500 ^r
Petroleum:					
Crude ⁴	thousand 42-gallon barrels	18,000	17,000	17,000	18,000 ^r
Refinery ^{5,6}	do.	15,000	9,000 ^r	11,000 ^r	8,000 ^r

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

¹Table includes data available through August 9, 2023. All data are reported unless otherwise noted; totals may include estimated data. Totals, estimated data, and some reported data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, nickel ammoniacal liquor precipitate, nickel oxide sinter, and some additional construction materials may have been produced, but available information was inadequate to make reliable estimates of output.

³Units of measure were converted to metric tons from cubic meters. Data are rounded to no more than two significant digits.

⁴Data may include mixtures of other derivatives that are added to crude petroleum to reduce its viscosity.

⁵Units of measure were converted to thousand 42-gallon barrels from metric tons. Data are rounded to no more than two significant digits.

⁶Data may include production of asphalt, fuel oil, motor gasoline, kerosene, liquefied petroleum gas, lubricants, naphtha, and petroleum coke.

TABLE 2
CUBA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity ^e
Cement, hydraulic		Cementos Cienfuegos S.A.	Cienfuegos plant, Cienfuegos, Cienfuegos Province	1,700
Do.		Empresa Mixta Cementos Curazao N.V.	Mariel plant, Mariel, Artemisa Province	1,500
Do.		Empresa de Cemento 26 de Julio [Grupo Empresarial de Cemento (GECEM) (Government, 100%)]	Nuevitas plant, Nuevitas, Camaguey Province	600
Do.		Empresa de Cemento Mártires de Artemisa [Grupo Empresarial de Cemento (GECEM) (Government, 100%)]	Artemisa plant, Artemisa, Artemisa Province	600
Do.		Empresa de Cemento Siguaney [Grupo Empresarial de Cemento (GECEM) (Government, 100%)]	Siguaney plant, Siguaney, Sancti Spiritus Province	150
Cobalt, mine, Co content		Empresa de Níquel Comandante Ernesto Che Guevara (Government, 100%)	Punta Gorda Mine Moa, Holguin Province	NA
Do.	metric tons	do.	Punta Gorda Smelter Moa, Holguin Province	600
Do.		Moa Nickel S.A. (Government, 50%, and Sherritt International Corp., 50%)	Moa Bay Mine and processing plant ¹ at Moa, Holguin Province	4
Gypsum, mine		Empresa de Materiales de la Construcción de Ciego de Ávila (AVILMAT)	Mine at Punta Alegre, Ciego de Avila Province	NA
Lead, mine, Pb content		Empresa Minera del Caribe Santa Lucía S.A. (Emincar) [Geominera S.A. (Government, 100%), 51%, and Trafigura Group Pte. Ltd., 49%]	Castellanos Mine and processing plant, Minas de Matahambre, Pinar del Rio Province	35
Natural gas, marketable	million cubic meters	Empresa de Perforación y Extracción de Petróleo del Centro (EPEP-C) (Government, 100%)	Oilfields at the northern coast between Havana and Cardenas, primarily Mayabeque Province	1,000
Do.	do.	Sherritt International Corp. (gross working interest in production-sharing contracts with the Government)	Puerto Escondido and Yumuri ² Oilfields	NA
Nickel, mine, Ni content		Empresa de Níquel Comandante Ernesto Che Guevara (Government, 100%)	Punta Gorda Mine Moa, Holguin Province	NA
Do.		do.	Punta Gorda Smelter Moa, Holguin Province	31
Do.		Moa Nickel S.A. (Government, 50%, and Sherritt International Corp., 50%)	Moa Bay Mine and processing plant ¹ at Moa, Holguin Province	35
Petroleum:				
Crude	thousand 42-gallon barrels	Empresa de Perforación y Extracción de Petróleo del Centro (EPEP-C) (Government, 100%)	Oilfields at the northern coast between Havana and Cardenas, primarily Mayabeque Province	10,000
Do.	do.	Sherritt International Corp. (gross working interest in production-sharing contracts with the Government)	Puerto Escondido and Yumuri ² Oilfields	5,000
Refinery products	do.	Unión Cuba-Petróleo (CUPET) (Government, 100%)	Camilo Cienfuegos refinery, Cienfuegos, Cienfuegos Province	23,700
Do.	do.	do.	Hermanos Díaz refinery, Santiago de Cuba, Santiago de Cuba Province	8,000
Do.	do.	do.	Ñico López refinery, City of Havana	16,000
Do.	do.	do.	Sergio Soto refinery, Cabaiguan, Sancti Spiritus Province	NA

See footnotes at end of table.

TABLE 2—Continued
CUBA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity ^e
Raw steel	Empresa Siderurgica Jose Marti Grupo (Empresarial de la Industria Sidero Mecánica (GESIME) (Government, 100%))	Plant at Cotorro, La Havana Province	170
Do.	Empresa de Aceros Inoxidables de las Tunas (ACINOX) [Grupo Empresarial de la Industria Sidero Mecanica (GESIME) (Government, 100%)]	Plant at Las Tunas, Las Tunas Province	60
Sand, silica	Empresa de Materiales de la Construcción de Sancti Spíritus (ECMSS)	Algaba Quarry, Sancti Spiritus Province	50
Sulfuric acid	Moa Nickel S.A. (Government, 50%, and Sherritt International Corp., 50%)	Plant at Moa, Holguin Province	2
Zeolites	Empresa Geominera Camaguey (Government, 100%)	El Chorillo plant, Camaguey Province	75
Do.	Empresa Geominera del Centro (Government, 100%)	Tasajeras plant, Villa Clara Province	75
Do.	Empresa Geominera Oriente (Government, 100%)	San Andres plant, Holguin Province	75
Zinc, mine, Zn content	Empresa Minera del Caribe Santa Lucía S.A. (Emincar) [Geominera S.A (Government, 100%), 51%, and Trafigura Group Pte. Ltd., 49%]	Castellanos Mine and processing plant, Minas de de Matahambre, Pinar del Rio Province	55

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

¹Included the Camarioca Norte, the Camarioca Sur, the Cantarrana, the La Delta, the Moa Occidental, the Moa Oriental, the Playa La Vaca-Zona Septentrional II, the Santa Teresita, and the Yagrumaje Oeste mining concessions.

²Crude petroleum and natural gas production ceased on March 20, 2021, after the term of the Puerto Escondido and Yumuri production-sharing contract expired on March 19, 2021.