



# 2017–2018 Minerals Yearbook

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## ISLANDS OF THE CARIBBEAN [ADVANCE RELEASE]

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# THE MINERAL INDUSTRIES OF THE ISLANDS OF THE CARIBBEAN

## ARUBA, THE DOMINICAN REPUBLIC, HAITI, JAMAICA, TRINIDAD AND TOBAGO, AND OTHER ISLANDS

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**Note: In the country sections of this chapter, information for 2017 is followed by information for 2018.**

### ARUBA

In 2017, mining did not play a significant role in Aruba's economy. The United States-based CITGO Petroleum Corp., which was an indirect wholly owned subsidiary of Petróleos de Venezuela S.A. (PDVSA), continued with its plans to restart the country's sole petroleum refinery. In June, CITGO announced the signing of several project agreements with the Government to expedite refurbishing the refinery. Once commissioned, the 209,000-barrel-per-day (bbl/d) refinery, located in southern Aruba, would be operated by the company's subsidiary, CITGO Aruba. In 2016, CITGO signed a commercial agreement with the Government to restart the refinery. Under the agreement, CITGO would lease the refinery for 15 years with a 10-year extension option. The refinery would convert extra-heavy crude petroleum from Venezuela's Orinoco Belt into intermediate crude for processing at CITGO's refinery facilities in the United States (table 2; CITGO Petroleum Corp., 2016a, b; 2017a–c).

#### Mineral Industry Highlights in 2018

During the year, CITGO slowed its plans to refurbish Aruba's petroleum refinery. The slowdown was attributed mainly to financial sanctions imposed by the United States on the Government of Venezuela in August 2017. The imposed sanctions prohibit all transactions related to providing financing for, and other dealings by a U.S. person or within the United States on behalf of or for the benefit of, the Government of Venezuela, including PDVSA. As a result, CITGO, as an indirect subsidiary of PDVSA, was unable to obtain additional funding for the project (Thomson Reuters, 2018; U.S. Department of the Treasury, 2020).

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### DOMINICAN REPUBLIC

The Dominican Republic occupies the eastern part of the Island of Hispaniola in the Caribbean region. The country's mineral industry was dominated by the production of copper, gold, nickel, silver, and zinc. Other mineral commodities produced in the country included cement, clay, gypsum, sand, and stone. In 2017, the country's real GDP increased by 4.7% compared with that of 2016; the mining and quarrying sector accounted for nearly 2.0% of the total GDP. Pueblo Viejo Dominicana Corp., which operated the Pueblo Viejo Mine, continued to be the leading gold producer in the Dominican Republic, accounting for about 99% of the country's total gold production (tables 1, 2; Banco Central de la República Dominicana, 2018a, p. 5, 11; 2020a).

#### Minerals in the National Economy

During the year, the output of the mining and quarrying sector decreased by 3.4% compared with an increase of 27% in 2016. The decrease in the mining and quarrying sector was attributed mainly to an 11% decrease in the production of gold. In 2017, the total value of the Dominican Republic's exports increased by 3.0% to about \$10 billion compared with about \$9.8 billion in 2016. The total value of gold exports accounted for about 14% (\$1.4 billion) of total exports and 82% of the total value of mineral exports. The total value of mineral exports decreased by 2.2% in 2017. The decrease in the value of total mineral exports was attributed to decreases in the export values

of limestone, by 49%, and gold, by 8%, as well as the halt of bauxite mining at the Las Mercedes deposit in 2015. The export values of ferronickel, zinc, silver, and copper increased by 69%, 30%, 21%, and 19%, respectively, however. During the year, the country imported \$406 million worth of crude petroleum (7.3 million barrels [Mbbbl]) and about \$255 million worth of natural gas (Hoy Digital, 2015; Banco Central de la República Dominicana, 2018a, p. 10–11; 2020b-c).

In 2017, the manufacturing industry (which included mining and quarrying) employed 446,704 people and accounted for about 10% of the total employment in the country. The legislative framework for the mineral sector in the Dominican Republic is provided by law No. 146 of June 4, 1971. According to the law, exploration concession licenses grant companies exclusive exploration rights for a maximum of 3 years and mining concession rights for a maximum of 75 years. The Ministerio de Energía y Minas (MEM) is responsible for administering national policy for the energy and mining sectors. The Viceministerio de Minas, which operates under the MEM, is the agency responsible for regulating, auditing, promoting, and developing the mining sector (Oficina Nacional de Estadística, 2019, p. 57; 2019b; Ministerio de Energía y Minas, 2019a, p. 1, 4; 2019b, c).

## Production

In 2017, the production of mined nickel increased by 42%; production of nickel contained in ferronickel increased by 58%. The increases in ferronickel and nickel outputs were attributed to the restarting of operations at Falconbridge Dominicana S.A. (the Falcondo Mine) in 2016. Silver production increased by 25%; pozzolan, by 55%; limestone, 40%; dolomite, 34%; silica sand, 27%; and clay, 20%. Gold production decreased by 11% to 33,910 kilograms (kg) from 37,933 kg (revised). The decrease in gold production was attributed to a temporary suspension of operations at Pueblo Viejo owing to planned maintenance. Other decreases included marble, by 38%, and gypsum, by 21% (Barrick Gold Corp., 2017, p. 3; Banco Central de la República Dominicana, 2018a, p. 11). Data on mineral production are in table 1.

## Structure of the Mineral Industry

Pueblo Viejo Dominicana, which was a joint venture between Canadian companies Barrick Gold Corp. (operator, 60%) and Goldcorp Inc. (40%), had the capacity to produce 35,000 kilograms per year of gold. Las Lagunas Mine, which was wholly owned by PanTerra Gold Ltd. of Australia, reprocessed high-grade gold and silver refractory tailings from the Pueblo Viejo Mine. Perilya Ltd. of Australia, through its subsidiary Corporación Minera Dominicana, owned the Cerro De Maimón located in the Monseñor Nouel Province. Cerro De Maimón continued to be the sole producer of zinc and the major producer of copper in the country. The Falcondo Mine was jointly owned by Americano Nickel Ltd. (85.3%), the Government (10%), Franco-Nevada Corp. of the United States (4.1%), and private interests (0.6%) (Antilles Gold Ltd., 2021). Table 2 lists major mineral industry facilities in the country.

## Commodity Review

### Metals

**Copper, Gold, Silver, and Zinc.**—GoldQuest Mining Corp. of Canada, through its subsidiary GoldQuest Dominicana SRL, owned 100% interest in the Romero gold-copper project, which included the Romero and the Romero South deposits. In 2016, the company reported its prefeasibility study results for the project, which was located in San Juan Province. Indicated mineral resources at Romero were reported to be 20.2 million metric tons (Mt) at an average grade of 2.67 grams per metric ton (g/t) gold, 4.0 g/t silver, 0.61% copper, and 0.30% zinc. Inferred mineral resources were reported to be 3.0 Mt at an average grade of 2.03 g/t gold, 2.9 g/t silver, 0.33% copper, and 0.32% zinc. The review and approval of GoldQuest's mining license application for the Romero project, which was submitted to the MEM in 2015, was expected to be completed by January 2018 (GoldQuest Mining Corp., 2017, p. 4; 2018).

**Nickel.**—Mined ore from Falcondo's mine was processed at the company's smelter to produce ferronickel. Ferronickel production (Ni content) increased to 15,632 metric tons (t) in 2017 from 9,913 t in 2016. During the year, Falcondo continued with its plans to ramp up its smelter operations, which included the installation of a second production line that would increase production to 34,000 metric tons per year of contained nickel in ferronickel. As of December 31, 2016, total nickel ore reserves at Falcondo were reported to be 71.2 Mt at an average grade of 1.31% nickel (Cámara Minera Petrolera de la República Dominicana, 2017; Franco-Nevada Corp., 2017, p. 18).

## MINERAL INDUSTRY HIGHLIGHTS IN 2018

In 2018, the Dominican Republic's real GDP increased by 7.0% compared with that of 2017. GDP growth was attributed partly to a significant increase in the value added of the construction sector, which increased by 12%; however, the value added of the mining and quarrying sector as a whole decreased by about 1.3% owing mainly to the underperformance of the gold outputs. The production of gold decreased by about 7%, mostly as a result of the temporary suspension of operations at Pueblo Viejo owing to planned maintenance. Employment in the manufacturing sector (which included mining and quarrying) continued to account for about 10% of the total employment in the country. Falcondo announced the start of operations at the smelter's second production line in September; as a result, the company operated at full capacity for the rest of the year. The production of mined nickel increased by 13%, and that of nickel content of ferronickel, by 23%. The production of clay decreased by 53%; silica, by 51%; dolomite, by 37%; and copper and pozzolan, by 11% each. The total value of the Dominican Republic's exports increased to \$10.9 billion in 2018, which was an increase of 7.6% compared with that of 2017. Mineral exports accounted for about 16% (about \$1.8 billion) of the country's total exports, and gold continued to be the leading mineral export, accounting for 77% (about \$1.4 billion) of the total value of mineral exports. Gold exports decreased by 7% compared with that of 2017, however. Exports of ferronickel continued to increase after the restarting

of the Falcondo smelter, and the value of ferronickel exports increased by 52% (\$234 million) (tables 1, 2; Banco Central de la República Dominicana, 2019, p. 6–11, 14, 17; 2020b–c; Falconbridge Dominicana S.A., 2018, 2019; Oficina Nacional de Estadística, 2019, p. 57, b).

## Outlook

The GDP of the Dominican Republic is expected to increase by about 5.0% in 2019. The value of the mining and quarrying sector is expected to increase by about 4.0% as a result of an expected increase in the production of ferronickel of about 46%. Gold production is likely to decrease because of the temporary suspension of operations at the Pueblo Viejo Mine as a result of planned maintenance that began in 2017. The country's total mineral export value is likely to increase by about 15% in 2019, owing mostly to an expected increase of 60% in the value of ferronickel exports. The expected increases in ferronickel production and exports are attributed to the rampup of Falcondo's operations in 2018. Despite the projected decrease in output, gold is expected to continue to be the leading mineral export in the country in terms of value, followed by ferronickel and silver (Barrick Gold Corp., 2018, p. 2; Banco Central de la República Dominicana, 2019, p. 14; 2020a–b).

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## HAITI

Haiti occupies the western part of the Island of Hispaniola in the Caribbean region and possesses similar economic mineral deposits to the Dominican Republic, although Haiti's resources have remained largely undeveloped. The geology of northern Haiti hosts numerous copper, gold, and silver occurrences and prospects. The country remained the poorest country in the Western Hemisphere, with close to 60% of the population living below the national poverty line. In 2017, Haiti's real GDP increased by 1.2% compared with that of 2016. The mineral sector did not play a significant role in Haiti's economy and made only a minor contribution of about 0.1% to the country's GDP (Institut Haïtien de Statistique et d'Informatique, 2018; EMX Royalty Corp., 2019; U.S. Central Intelligence Agency, 2019; World Bank, The, 2020).

Exploring for or mining mineral and energy resources requires authorization from Le Bureau des Mines et de l'Énergie [the Bureau of Mining and Energy], which was under the Ministère des Travaux Publics, Transports et Communications [Ministry of



Public Works and Communications]. Mining, prospecting, and operating permits were granted only to companies established in Haiti. In 2012, for the first time in more than 30 years, the Government had awarded mining permits to mine for gold and copper. Mining permits were awarded to the Société Minière du Nord-Est S.A. and Delta Société Minière S.A. In 2013, however, the Government suspended all mining permits in the country while it began working on new legislation to reform the 1976 mining law. The Government submitted a draft mining law to the Parliament in 2017. Under the new draft law, exploration permits and mining projects would no longer require the approval of the country's Parliament but only authorization from the Prime Minister, the Minister of Finance, and the Bureau of Mining (Jamaica Observer, 2012; U.S. Department of Commerce, 2018, p. 42; U.S. Department of State, 2018; EMX Royalty Corp. 2019).

## MINERAL INDUSTRY HIGHLIGHTS IN 2018

In 2018, Haiti's real GDP increased by 1.5% compared with that of 2017. The mineral sector made only a minor contribution—about 0.1%—to the country's GDP. New legislation to reform Haiti's mining law continued to be under revision in the Parliament (Institut Haitien de Statistique et d'Informatique, 2018; U.S. Department of Commerce, 2018).

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## JAMAICA

Jamaica's mineral industry continued to be dominated by bauxite and alumina production. Bauxite and alumina continued to be the main sources of foreign trade, accounting for about 46% of the country's total export revenue. Industrial minerals produced in the country included cement, gypsum, lime, limestone, pozzolan, sand and gravel, and silica. The country also produced petroleum refinery products (table 1; Bank of Jamaica, 2018b).

## Minerals in the National Economy

Jamaica's real GDP increased by 0.7% in 2017 compared with that of 2016. The mining and quarrying sector's contribution to the total GDP decreased by about 18% compared with that of 2016. The value of the mining and quarrying sector decreased by 4.0% in 2017, which was attributed to decreases in alumina production (by 4.5%) and bauxite (by 3.5%). In 2017, 5,200 workers were employed in the mining, quarrying, and refining industries, which accounted for less than 1% of the workforce in the country. Employment in bauxite mining and drying increased by about 16% to 283 workers in 2017, and in the alumina plants, by about 67% to 2,269 workers (table 1; Bank of Jamaica, 2018a, p. 20–21, 23; 2019, p. 26; Jamaica Bauxite Institute, 2020b).

The total value of goods exported from Jamaica was \$1.3 billion in 2017 compared with \$1.2 billion in 2016. In 2017, the value of bauxite exports was \$92 million, which was the same value as in 2016. The value of alumina exports was \$509 million compared with \$444 million in 2016, which was an increase of about 15%. According to the Jamaica Bauxite Institute, the country exported 8.1 Mt of bauxite (including bauxite equivalent of alumina and crude bauxite) in 2017 compared with 8.3 Mt in 2016 and 1.7 Mt of alumina compared with 1.8 Mt. Bauxite and alumina exports to the United States were valued at \$79.2 million in 2017 and accounted for about 23% of the total value of exports to the United States compared with \$99.9 million in 2016 (Bank of Jamaica, 2018b; Jamaica Bauxite Institute, 2020b, c; U.S. Census Bureau, 2020).

## Production

Data on mineral production are in table 1.

## Structure of the Mineral Industry

In June, Jiuquan Iron & Steel (Group) Co., Ltd. (JISCO) of China, restarted operations at Alumina Partners of Jamaica's (Alpart's) bauxite mine and alumina refinery. JISCO purchased the Alpart mine and refinery from United Company RUSAL plc of Russia in 2016. RUSAL suspended operations at Alpart in 2009 owing to low metal prices. Trinidad Cement Ltd., through its subsidiary Caribbean Cement Co. Ltd., was the country's only cement producer and had the capacity to produce 2.2 million metric tons per year (Mt/yr) of cement. The joint venture between the Government (51%) and PDVSA (49%) owned Petrojam Ltd., which was the sole petroleum refinery in the country (table 2; United Company RUSAL plc, 2016; Jamaica Bauxite Institute, 2020a).

## Commodity Review

### Metals

**Bauxite and Alumina.**—JISCO planned to invest about \$3.0 billion over 3 years to modernize and expand the Alpart alumina refinery and increase its production capacity to 2.0 Mt/yr from 1.65 Mt/yr by 2020. The program would also include the redevelopment and expansion of Port Kaiser to accommodate ships with a carrying capacity of up to 100,000 t.

In December, JISCO announced its first shipment of alumina (35,000 t) from Port Kaiser to China (Jamaica Observer, 2017a, b; Linton, 2017).

### **Mineral Fuels**

**Petroleum.**—In February, the Government of Jamaica and the Government of Venezuela, which was the owner of PDVSA, signed an agreement to complete a \$1.0 billion expansion program at Petrojam. The expansion program would increase the refinery's production capacity to 50,000 bbl/d from 36,000 bbl/d (Petrojam Ltd., 2017).

### **MINERAL INDUSTRY HIGHLIGHTS IN 2018**

Jamaica's mineral industry continued to be dominated by bauxite and alumina production. The country's real GDP increased by 1.7% in 2018 compared with that of 2017; the increase was attributed mainly to growth in the mining and quarrying and tourism sectors. In 2018, production of bauxite and alumina increased by 22% and 39%, respectively. The increase in production was attributed to the restart of the Alpart alumina refinery in 2017. In September, the Government awarded a new and expanded special mining lease to Noranda Bauxite Ltd., a subsidiary of New Day Aluminum LLC of the United States. The 25-year lease (with a 25-year renewal option) would allow for the mining of up to 5.2 Mt/yr of bauxite from reserves located at St. Ann and Trelawny. In March, the Government also announced its plans to acquire PDVSA's 49% share in Petrojam. The Government decision to acquire PDVSA's share was owing to the continuing delays in the Petrojam expansion program as well as the U.S. financial sanctions imposed on the Government of Venezuela, including PDVSA (tables 1, 2; Gleaner Company (Media) Ltd., The, 2018; New Day Aluminum LLC, 2018; Bank of Jamaica, 2019, p. 26; Jamaica Observer, 2019; U.S. Department of the Treasury, 2020).

### **Outlook**

The country's economy is forecast to grow by nearly 1.0% in 2019. Bauxite and alumina are likely to remain the leading mineral products in terms of generating Government revenues and the leading mineral export products (Bank of Jamaica, 2018a, p. 34).

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### **TRINIDAD AND TOBAGO**

Trinidad and Tobago continued to be the leading petroleum and natural gas producer in the Caribbean region. Other minerals produced in the country included cement, fertilizer, methanol, natural gas liquids, nitrogen, sulfur, and petroleum refinery products. According to the BP Statistical Review of World Energy, Trinidad and Tobago's proven crude petroleum reserves were estimated to be about 200 Mbbbl and its proven natural gas reserves were estimated to be about 0.3 trillion cubic meters. In 2017, the country was the world's seventh-ranked liquefied natural gas (LNG) exporter and the leading supplier of LNG to the United States, accounting for 90% of U.S. LNG imports. Trinidad and Tobago also had one of the Western Hemisphere's largest natural-gas-processing facilities—the Phoenix Park Gas Processors Ltd. natural gas liquids complex (table 1; BP p.l.c, 2018a, p. 12, 26, 34; U.S. Department of Energy, 2016).

### **Minerals in the National Economy**

Trinidad and Tobago's real GDP decreased by 2.3% in 2017 compared with a decrease of 6.3% (revised) in 2016. The country's mining and quarrying sector accounted for about

12% of the total GDP; however, that sector's GDP growth was marginal, at 0.9%. During the year, BP Trinidad and Tobago LLC (BPTT) began operations at its Juniper and Trinidad Onshore Compression projects. The increased availability of natural gas improved midstream and downstream activities, thereby increasing the production of natural gas liquids and petrochemicals, such as ammonia and methanol. In 2017, 48,900 people were employed in the manufacturing sector (including mining and quarrying), which accounted for about 8% of the total labor force in the country. Employment in the petroleum and natural gas sector decreased by 21% to 14,500 workers in 2017. The Ministry of Energy and Energy Affairs was the Government entity responsible for the monitoring, enforcement, and regulation of the energy and mineral sectors (Central Bank of Trinidad and Tobago, 2018a, p. 5, 8; 2018b, p. 4; 2018c; 2020a, p. A.3, 6; Ministry of Energy and Energy Affairs, 2019a–b).

In 2017, the total value of Trinidad and Tobago's exports increased by 14% compared with that of 2016. The increase was attributed to an increase in the value of energy exports, by 19%, as well as an increase in crude petroleum and natural gas prices. Energy exports, which included crude petroleum, natural gas liquids, and methanol, accounted for about 80% of the country's total exports in 2017. During the year, exports of crude petroleum totaled 10.0 Mbbbl compared with 10.3 Mbbbl in 2016; natural gas liquids, 8.5 Mbbbl compared with 8.0 Mbbbl; and methanol, 5.0 Mt compared with 4.6 Mt. The country also exported 219,200 t of cement compared with 192,700 t in 2016 (Central Bank of Trinidad and Tobago, 2018b, p. 30, 45–47; 2020b).

## Production

In 2017, production of petroleum refinery products decreased by 12% to 47.7 Mbbbl from 54.3 Mbbbl in 2016. The decrease was attributed mainly to an oil spill from a ruptured fuel storage tank at the Pointe-a-Pierre refinery in April and a precautionary suspension of petroleum refinery product production during Tropical Storm Bret in June (table 1; Central Bank of Trinidad and Tobago, 2018a, p. 8).

## Structure of the Mineral Industry

Table 2 lists major mineral industry facilities in the country.

## Commodity Review

### *Mineral Fuels*

**Petroleum and Natural Gas.**—BPTT, which was a joint venture between BP p.l.c. of the United Kingdom (70%) and Repsol S.A. of Spain (30%), began operations at the Juniper project and the Trinidad Onshore Compression project in August. The Juniper project was the company's first subsea field development in the country with an investment cost of about \$2 billion. The facility produced natural gas from the Corallita and the Lantana fields by way of the Juniper platform, which was located 80 kilometers (km) offshore southeast Trinidad. Natural gas would be exported to the existing Mahogany Bravo offshore hub through a new 10-km-long pipeline. Juniper had the capacity to produce about 16.7 million cubic meters per day of natural gas. The Trinidad Onshore Compression project

would increase production from low-pressure wells in the Columbus Basin using an additional inlet compressor at the Point Fortin Atlantic LNG plant (BP p.l.c., 2017a, b; 2018a, p. 16, 27, 255).

BHP Billiton Ltd. of Australia held a 45% interest and was the operator of the Greater Angostura field, located 40 km offshore east of Trinidad. The remaining interest in the Angostura field was owned by the Government (30%) and Chaoyang Petroleum (25%). Greater Angostura had the capacity to produce 100,000 bbl/d of crude petroleum and 9.6 million cubic meters per day of natural gas. Crude petroleum produced from the field was sold to international markets, whereas natural gas was sold domestically (BHP Billiton Ltd., 2018, p. 66, 202, 243).

## MINERAL INDUSTRY HIGHLIGHTS IN 2018

Trinidad and Tobago's real GDP decreased by 0.2% in 2018 compared with that of 2017. In 2018, the country's mining and quarrying sector accounted for about 14% of the total GDP, although the mining and quarrying sector decreased by 4.4%. Trinidad and Tobago's total value of exports increased by 11.4% to \$10.5 billion in 2018 compared with that of 2017. Energy exports accounted for 84% of the total exports and increased by about 16% in 2018. Exports of crude petroleum totaled 8.0 Mbbbl; natural gas liquids, 7.7 Mbbbl; fertilizers, 4.9 Mt; methanol, 5.0 Mt; and cement, 270,900 t in 2018. During the year, the production of crude petroleum decreased by 12% as a result of continued challenges in maintaining crude petroleum outputs from mature acreage. The production of natural gas liquids decreased by 11%, as yields had been affected by the increasingly dry nature of the natural gas extracted. Production of refined petroleum products also decreased by 25%, which was attributed mainly to the shutdown of the state-owned Petroleum Company of Trinidad and Tobago Ltd. (Petrotrin) operations, including the Pointe-a-Pierre refinery on November 30. The Government stated that Petrotrin was overburdened with debt, as its net debt position at yearend 2015 amounted to \$11.4 billion. As a result, three new companies were created: Guaracara Refining Co. (all refinery assets), Heritage Petroleum Co. Ltd. (exploration and production), and Paria Fuel Trading Co. (trading and marketing). Petrotrin was retained as an entity to deal with legal matters. All four companies were subsidiaries of Trinidad Petroleum Holdings Ltd. (tables 1, 2; Central Bank of Trinidad and Tobago, 2019, p. 5, 32, 49–50, 99; 2020a, p. A.3, 6; 2020b).

## Outlook

According to the Central Bank of Trinidad and Tobago, the country's economy is likely to improve in 2019 and is forecast to grow by about 1.7%. The country is expected to have continuing challenges maintaining crude petroleum production from mature acreage. Energy exports are expected to decrease in 2019, particularly those of refined petroleum products owing to the shutdown of the country's sole refinery and lower international commodity prices. The energy sector is expected to remain important to the country's long-term economic growth, however, and a main contributor to Government revenue (Central Bank of Trinidad and Tobago, 2020a, p. 4, 6, 8, 37).



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## THE BAHAMAS, BARBADOS, GUADELOUPE, MARTINIQUE, AND OTHER ISLANDS OF THE CARIBBEAN

Mining did not play a significant role in the economies of The Bahamas, Barbados, Guadeloupe, Martinique, and other islands of the Caribbean. In many cases, mining was limited to the production of industrial minerals for domestic consumption, such as those used for construction. Barbados, Guadeloupe, and Martinique produced cement. Trinidad Cement Ltd., through its subsidiary Arawak Cement Company Ltd., held 100% interest in the Arawak Cement plant located in Checker Hall, Barbados. LafargeHolcim Ltd. of Switzerland held a 69.7% interest in Société des Ciments Antillais, which operated two cement plants located in Baie Mahault, Guadeloupe and in Fort-de-France Bay, Martinique. Bahamas Oil Refining Company International Ltd., owned by Buckeye Partners, L.P. (80%), served as a refined petroleum product storage facility. Buckeye Bahamas Hub, located in Freeport, Grand Bahama Island, had a storage capacity of about 26.2 Mbbbl. Buckeye Bahamas Hub storage included capacity for crude petroleum, fuel oil, and diesel fuel, and gasoline (table 2; Buckeye Partners, L.P., 2020).

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TABLE 1  
ISLANDS OF THE CARIBBEAN: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Country and commodity <sup>2</sup>	2014	2015	2016	2017	2018
<b>BARBADOS</b>					
Cement, hydraulic <sup>c</sup> thousand metric tons	160	160	160	160	160
<b>DOMINICAN REPUBLIC</b>					
Bauxite	1,446,311	1,724,162	7,318	--	--
Cement, hydraulic thousand metric tons	5,018 <sup>r</sup>	5,181 <sup>r</sup>	5,171 <sup>r</sup>	5,254	5,430
Clay <sup>3</sup>	200,000	150,000	250,000	300,000	141,000
Copper, mine, concentrates, Cu content	9,262	7,324	9,725	9,618	8,588
Gold, mine, Au content kilograms	35,081	30,454	37,933	33,910	31,633
Gypsum, mine <sup>3</sup>	240,000	240,000	140,000	110,000	130,000
Ferroalloys, ferronickel, smelter output:					
Gross weight	--	--	33,203	43,894	53,000 <sup>e</sup>
Ni content	--	--	9,913	15,632	19,214
Nickel:					
Mine, laterite ore:					
Gross weight	--	--	1,557,847	2,208,371	2,502,980
Ni content	--	4,000 <sup>e,r</sup>	19,900 <sup>e,r</sup>	28,300 <sup>e</sup>	34,700 <sup>e</sup>
Sand and gravel, industrial, silica <sup>3</sup>	--	27,000 <sup>r</sup>	74,000 <sup>r</sup>	94,000	46,000
Silver, mine, Ag content kilograms	135,108 <sup>r</sup>	99,800 <sup>r</sup>	121,749 <sup>r</sup>	151,757	166,500
Stone, sand, and gravel, construction: <sup>3</sup>					
Stone:					
Crushed:					
Dolomite	4,400	13,000	4,400	5,900	3,700
Limestone	2,700,000	2,800,000	4,300,000	6,000,000	6,000,000
Dimension, travertine	5,700	17,000	13,000	13,000	14,000
Other, size and shape unspecified:					
Marble	5,200	2,000	1,600	1,000	1,200
Pozzolan	46,000	61,000	53,000	82,000	73,000
Zinc, mine, Zn content	--	4,655	3,636	3,920	4,000 <sup>e</sup>
<b>GUADELOUPE</b>					
Cement, hydraulic <sup>c</sup> thousand metric tons	300	300	300	300	310
Pumice <sup>c</sup>	200,000	200,000	200,000	200,000	200,000
<b>HAITI</b>					
Cement, hydraulic <sup>c</sup> thousand metric tons	200	200	200	200	200
<b>JAMAICA</b>					
Aluminum:					
Bauxite, dry basis thousand metric tons	9,677	9,629	8,540	8,245	10,058
Alumina do.	1,851	1,865	1,865 <sup>r</sup>	1,782	2,484
Cement, hydraulic do.	830	808	911	910 <sup>e</sup>	930 <sup>e</sup>
Gypsum, mine	45,201	42,833	49,703	50,000 <sup>e</sup>	50,000 <sup>e</sup>
Lime	104,140	105,000 <sup>e</sup>	105,000 <sup>e</sup>	110,000 <sup>e</sup>	110,000 <sup>e</sup>
Petroleum, refinery thousand 42-gallon barrels	6,585	8,239	7,263	7,056	7,340
Pumice and related materials, pozzolan	129,171	130,000	130,000 <sup>e</sup>	130,000 <sup>e</sup>	130,000 <sup>e</sup>
Sand and gravel, industrial, silica, unspecified	15,833	15,554	19,757	20,000 <sup>e</sup>	20,000 <sup>e</sup>
Stone, sand and gravel, construction:					
Sand and gravel, unspecified thousand metric tons	2,118	2,208	1,766	1,800 <sup>e</sup>	1,800 <sup>e</sup>
Stone, dimension, limestone do.	2,138	1,782	2,748	2,700 <sup>e</sup>	2,700 <sup>e</sup>
<b>MARTINIQUE</b>					
Cement, hydraulic <sup>c</sup> thousand metric tons	150	150	150	150	150
<b>TRINIDAD AND TOBAGO</b>					
Cement, hydraulic thousand metric tons	837 <sup>r</sup>	840 <sup>r</sup>	721 <sup>r</sup>	670	663
Fertilizers do.	5,172	5,453	5,522 <sup>r</sup>	5,595	5,431
Iron and steel:					
Direct-reduced iron <sup>4</sup>	3,240,000 <sup>r</sup>	2,520,000 <sup>r</sup>	1,500,000 <sup>r</sup>	1,590,000	1,540,000
Raw steel	483,300	266,500	--	--	--

See footnotes at end of table.

TABLE 1—Continued  
ISLANDS OF THE CARIBBEAN: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Country and commodity <sup>2</sup>	2014	2015	2016	2017	2018
TRINIDAD AND TOBAGO—Continued					
Methanol thousand metric tons	5,481	5,516	4,655	4,975	5,081
Natural gas million cubic meters	42,085	39,603	34,418	34,690	37,500
Nitrogen, N content:					
Ammonia, anhydrous	3,886,000 <sup>r</sup>	4,032,000 <sup>r</sup>	4,040,000 <sup>r</sup>	4,144,000	3,988,000
Urea	441,817	547,400	607,367	553,996	579,970
Petroleum:					
Crude <sup>5</sup> thousand 42-gallon barrels	29,659	28,700	26,092	26,200	23,175
Natural gas liquids do.	11,992	10,992	9,214	9,806	8,695
Refinery do.	38,212	45,766	54,256	47,720	36,000
Sulfur, S content	5	10	16	1	1 <sup>e</sup>

<sup>e</sup>Estimated. <sup>r</sup>Revised. do. Ditto. -- Zero.

<sup>1</sup>Table includes data available through January 15, 2020. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

<sup>2</sup>The countries of Aruba, The Bahamas, Barbados, Dominica, Martinique, and St. Kitts and Nevis are known to have production of such mineral commodities as aragonite, lime, limestone, petroleum refinery products, pumice, salt, sand and gravel, stone, and sulfur but available information was inadequate to make reliable estimates of output. The Dominican Republic also produces petroleum refinery products; Jamaica also produces clay, marble, marl, and shale; and Trinidad and Tobago also produces clay, limestone, and sand and gravel, but available information was inadequate to make reliable estimates of output.

<sup>3</sup>Units of measurement were converted to metric tons from cubic meters. Data are rounded to no more than two significant digits.

<sup>4</sup>Source: Midrex Technologies, Inc.

<sup>5</sup>Includes condensate.

TABLE 2  
ISLANDS OF THE CARIBBEAN: STRUCTURE OF THE MINERAL INDUSTRIES IN 2018

(Metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity <sup>e</sup>
<b>ARUBA</b>				
Petroleum, refined	42-gallon barrels per day	CITGO Petroleum Corp., 100%	Refinery, <sup>1</sup> southern Aruba	209,000
<b>BAHAMAS, THE</b>				
Petroleum, refined	thousand 42-gallon barrels	Bahamas Oil Refining Company International Ltd. (Buckeye Partners, L.P., 80%)	Storage facilities, <sup>2</sup> Freeport	26,200
<b>BARBADOS</b>				
Cement		Arawak Cement Company Ltd. (Trinidad Cement Ltd., 100%)	Plant, Checker Hall, Saint Lucy	360,000
<b>DOMINICAN REPUBLIC</b>				
Bauxite		Dovemco S.A.	Mercedes Mine, <sup>3</sup> Pedernales Province	NA
Copper		Corporación Minera Dominicana (CMD) (Perilya Ltd., 100%)	Cerro de Maimon Mine, Monseñor Nouel Province	15,000
Gold	kilograms	do.	do.	600
Do.	do.	PanTerra Gold. Ltd., 100%	Las Lagunas Project, <sup>4</sup> Sanchez Ramirez Province	1,600
Do.	do.	Pueblo Viejo Dominicana Corp. (Barrick Gold Corp., 60%, and Goldcorp Inc., 40%)	Pueblo Viejo Mine, Sanchez Ramirez Province	35,000
Nickel		Falconbridge Dominicana S.A. (Americano Nickel Ltd., 85.3%; Government, 10%; Franco-Nevada Corp., 4.1%; private interests, 0.6%)	Falcondo Mine, Loma Las Peguera, Bonao, Monseñor Nouel Province	NA
Nickel (Ni content of ferronickel)		do.	Falcondo smelter, Loma Las Peguera, Bonao Monseñor Nouel Province	32,000
Petroleum, refined	42-gallon barrels per day	Refinería Dominicana de Petróleo PDV S.A. (Government, 51%, and Petróleos Venezuela S.A., 49%)	Refinery, Haina Port, San Cristobal Province	34,000
Silver	kilograms	Corporación Minera Dominicana (CMD) (Perilya Ltd., 100%)	Cerro de Maimon Mine, Monseñor Nouel Province	15,000
Do.	do.	Las Lagunas project (PanTerra Gold. Ltd., 100%)	Las Lagunas project, <sup>4</sup> Ramirez Province	14,000
Do.	do.	Pueblo Viejo Dominicana Corp. (Barrick Gold Corp., 60%, and Goldcorp Inc., 40%)	Pueblo Viejo Mine, Sanchez Ramirez Province	110,000
Zinc		Corporación Minera Dominicana (CMD) (Perilya Ltd., 100%)	Cerro de Maimon Mine, Monseñor Nouel Province	NA
<b>GUADELOUPE</b>				
Cement		Société des Ciments Antillais (LafargeHolcim Ltd., 69.7%)	Plant, Baie Mahault	NA
<b>HAITI</b>				
Cement		Cimenterie Nationale S.E.M. (Cementos Argos S.A., 65%)	Plant, Cabaret	850,000
<b>MARTINIQUE</b>				
Cement		Société des Ciments Antillais (LafargeHolcim Ltd., 69.7%)	Plant, Fort-de-France Bay	NA
<b>JAMAICA</b>				
Alumina		Alumina Partners of Jamaica (Alpart) (Jiquan Iron & Steel (Group) Co., Ltd. 100%)	Refinery, Nain, St. Elizabeth	1,650,000
Do.		Jamaica Aluminum Co. (Jamalco) (Noble Group Ltd., 55%, and Government, 45%)	Refinery, Halse Hall, Clarendon	1,400,000
Do.		West Indies Alumina Co. (Windalco) (United Company RUSAL Plc, 100%)	Refinery, Ewarton Works, St. Catherine	600,000
Bauxite		Alumina Partners of Jamaica (Alpart) (Jiquan Iron & Steel (Group) Co., Ltd., 100%)	Mine, Nain, St. Elizabeth	4,900,000
Do.		Jamaica Aluminum Co. (Jamalco) (Noble Group Ltd., 55%, and Government, 45%)	Mine, Manchester	1,800,000

See footnotes at end of table.

TABLE 2—Continued  
ISLANDS OF THE CARIBBEAN: STRUCTURE OF THE MINERAL INDUSTRIES IN 2018

(Metric tons unless otherwise specified)

Country and commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity <sup>e</sup>	
JAMAICA—Continued				
Bauxite—Continued	Noranda Bauxite (New Day Aluminum LLC, 49%, and Government, 51%)	Mine, St. Ann	5,200,000	
Do.	West Indies Alumina Co. (Winalco) (United Company RUSAL plc, 100%)	Mines, Russell Place and Schwallenburgh	5,000,000	
Cement	Caribbean Cement Co. Ltd. (Trinidad Cement Ltd., 74%)	Plant, Rockfort, Kingston	2,200,000	
Petroleum, refined	42-gallon barrels per day	Petrojam Ltd. (Government, 51%, and Petróleos de Venezuela S.A., 49%)	Refinery, Kingston Port	36,000
TRINIDAD AND TOBAGO				
Ammonia	Methanol Holdings (Trinidad) Ltd.	Ammonia Urea Nitrate Melamine Plant, Point Lisas Industrial Estate	650,000	
Do.	Caribbean Nitrogen Co. (EOG Resources Trinidad Ltd., KOCH Industries, Man Ferrostaal, and Proman Group)	Plant, Point Lisas Industrial Estate	650,000	
Do.	Nitrogen (2000) Unlimited (EOG Resources Trinidad Ltd., KOCH Industries, Man Ferrostaal, and Proman Group)	Nitrogen 2000 Plant, Industrial Estate Point Lisas	650,000	
Do.	Nutrien Ltd.	Nutrien Ammonia 1, 2, 3, 4 Plants, Point Lisas Industrial Estate	2,200,000	
Do.	Point Lisas Nitrogen Ltd. (CF Industries Holdings Inc, 50%, and KOCH Fertilizer LLC, 50%)	Plant, Point Lisas Industrial Estate	650,000	
Do.	Trinidad Nitrogen Co. Ltd. (Government, 51%, and Yara International ASA, 49%)	Tringen I and II, Point Lisas Industrial Estate	1,000,000	
Do.	Yara Trinidad Ltd. (Yara International ASA, 100%)	Yara Plant, Point Lisas Industrial Estate	300,000	
Cement	Trinidad Cement Ltd.	Claxton Bay	1,200,000	
Clay	Trinidad Aggregate Products Ltd.	Depot Road, Longdenville	NA	
Iron and steel	ArcelorMittal Steel Point Lisas Ltd.	Point Lisas Industrial Estate <sup>1</sup>	2,700,000	
Liquefied natural gas	BP (Barbados) Holding SRL, 34%; BG Atlantic 1 Holding Ltd., 26%; Shell LNG Port Spain BV, 20%; NGC Trinidad and Tobago LNG Ltd., 10%; Summer Soca LNG, 10%	Train 1, Point Fortin	3,000,000	
Do.	BP Train 2/3 Holding SRL, 42.5%; BG 2/3 Investment Ltd., 32.5%; Shell LNG Port Spain BV, 25%	Trains 2 and 3, Point Fortin	6,600,000	
Do.	BP (Barbados) Holding SRL, 37.78%; BG Atlantic 4 Holdings Ltd., 28.89%; Shell LNG Port Spain BV, 22.22%; Trinidad and Tobago LNG, 11.11%	Trains 4, Point Fortin	5,200,000	
Methanol	Methanex Corp., 63.1%	Atlas plant, Point Lisas Industrial Estate	1,700,000	
Do.	do.	Titan plant, Point Lisas Industrial Estate	850,000	
Do.	Methanol Holdings (Trinidad) Ltd., of which:	Plants, Point Lisas Industrial Estate	4,800,000	
	Caribbean Methanol Company		(550,000)	
	Methanol IV Company Ltd.		(580,000)	
	M5000 Methanol		(1,900,000)	
	Trinidad and Tobago Methanol Company Ltd.		(1,050,000)	

See footnotes at end of table.



TABLE 2—Continued  
ISLANDS OF THE CARIBBEAN: STRUCTURE OF THE MINERAL INDUSTRIES IN 2018

(Metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity <sup>e</sup>
TRINIDAD AND TOBAGO—				
Continued				
Natural gas	cubic meters per day	Greater Angostura (BHP Billiton Ltd., 45%; Government, 30%; Chaoyang Petroleum, 25%)	Greater Angostura oilfield	9,600,000
Do.	do.	BP Trinidad and Tobago LLC (BP p.l.c., 70%, and Repsol S.A., 30%)	Juniper, 80 kilometers offshore southeastern Trinidad	16,700,000
Natural gas liquids	42-gallon barrels per day	Phoenix Park Gas Processors Ltd. (National Gas Company of Trinidad and Tobago, 51%)	Plant, Point Lisas Industrial Estate	70,000
Petroleum:				
Crude	42-gallon barrels per day	Greater Angostura (BHP Billiton Ltd., 45%; Government, 30%; Chaoyang Petroleum, 25%)	Greater Angostura oilfield	100,000
Do.	do.	Heritage Petroleum Co. Ltd. <sup>5</sup> (Government, 100%)	Coora, WD-4, WD-8, <sup>6</sup> Fyzabad oilfields	NA
Refined	do.	Guaracara Refining Co. <sup>5</sup> (Government, 100%)	Refinery, Pointe-a-Pierre <sup>7</sup>	168,000
Stone, limestone, blue		Cumaca Blue Limestone Products Ltd.	Cumaca Road, Valencia	NA
Do.		Cumana Enterprise Ltd.	Toco Road, Cumana	NA
Do.		Harripersad Dookeran	Quarry Road, Guaracara	NA
Do.		Hermitage Limestone Ltd.	Tumbason Road, Arima	NA
Do.		RRJ Ltd.	Tabaquite Road, Guaracara	NA
Do.		Saiscon Ltd.	Corosal Road, Mayo	NA
Do.		Springbank Quarry Ltd.	Heights of Guanapo, Arima	NA
Do.		St. Alban's Sand and Gravel Co. Ltd.	Cumaca Road, Cumaca	NA
Urea	metric tons	Methanol Holdings Ltd.	Ammonia Urea Nitrate Melamine complex, Point Lisas Industrial Estate	800,000
Do.	do.	Nutrien Ltd.	Nutrien urea plant, Point Lisas Industrial Estate	700,000

<sup>e</sup>Estimated. Do., do. Ditto. NA Not available.

<sup>1</sup>Closed.

<sup>2</sup>Storage facilities.

<sup>3</sup>Bauxite mining operations were halted by the Government of the Dominican Republic in 2015.

<sup>4</sup>Las Lagunas project involves the reprocessing of gold and silver refractory tailings from previous operations at the Pueblo Viejo Mine.

<sup>5</sup>Subsidiary of Trinidad Petroleum Holdings Ltd.

<sup>6</sup>Operated by Touchstone Exploration Inc. (100% working interest).

<sup>7</sup>Closed in November 2018.