



2012 Minerals Yearbook

ISLANDS OF THE CARIBBEAN

THE MINERAL INDUSTRIES OF THE ISLANDS OF THE CARIBBEAN

ARUBA, CUBA, DOMINICAN REPUBLIC, JAMAICA, TRINIDAD AND TOBAGO, AND OTHER ISLANDS

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The economies of the island nations of the Caribbean vary in terms of their magnitude and resiliency, but all are sensitive to the economic variability and economic projections of relatively more advanced economies. According to the Economic Commission for Latin America and the Caribbean (ECLAC), the economies of the Caribbean region as a whole grew by 3.2% in 2012 compared with the overall growth rate in 2011. Selected countries of the Caribbean that were identified in the analysis included Antigua & Barbuda, The Bahamas, Barbados, Dominica, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad & Tobago. The economies of the Caribbean remained sluggish as such globally economic problems as the continued financial crisis in the euro area, shrinking economic growth in Japan and the United Kingdom, and the uncertainty brought about by the fiscal cliff debates in the United States negatively affected tourism and external demand for goods produced in the Caribbean. The ECLAC estimated that the economy of the Caribbean as a whole would grow by 1.1% in 2012 and would expand by 2.0% in 2013 compared with the group's previous forecasts of 1.6% and 2.2%, respectively.

ARUBA

As of August 2012, China's state-run oil company PetroChina Co. Ltd. concluded an "agreement in principle" with Valero Energy Corp. (Valero) to purchase the idled Aruba refinery. This was the second time in 2 years that the Chinese company had discussed purchasing the plant; however, no deal had been finalized. The refinery, which processed heavy crude petroleum, had become unprofitable to operate because it relied on fuel oil rather than the less expensive natural gas. PetroChina established an agreement with Venezuela's state-run oil company Petr leos de Venezuela S.A. (PDVSA) (China's fourth-ranked crude oil supplier) for PDVSA to supply PetroChina with heavy crude. The refinery had previously accounted for about one-third of Aruba's economy; it was idled in 2010 because of low profit margins, and was expected to be functioning primarily as a storage terminal by the end of 2012 (table 1; EIUuniversal.com, 2012; Reuters, 2012; Argus Media, Ltd., 2013).

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CUBA

In 2012, Cuba was estimated to be the world's sixth-ranked producer of cobalt (as a byproduct of nickel processing) and the ninth-ranked producer of nickel. Other mineral commodities produced in Cuba included asphalt, bentonite, cement, feldspar, gypsum, iron ore, kaolinite, lime, limestone, marble, natural gas, nitrogen, crude petroleum, and petroleum refinery products. By yearend, the Ren  Ramos Latourt plant located in Nicaro, which was the oldest of the country's three nickel plants, was closed. Production at the plant had reportedly dwindled in recent years to a few thousand tons per year of unrefined nickel and byproduct cobalt. The two remaining plants included one at the Moa Bay operation—a joint venture between Sherritt International Corp. of Canada and state-owned Cubaniquel—and another at the Punta Gorda Mine, which was wholly owned by Cubaniquel (Frank, 2012).

Minerals in National Economy

The estimated real gross domestic product (GDP) growth rate in Cuba was 3.0% in 2012, and production from Cuban mines and quarries in 2012 accounted for 0.6% of the GDP. Associated sectors of Cuba's economy, including industrial manufacturing (excluding the sugar industry), construction, and the sector composed of electricity, gas, and water, however, accounted for 14.2%, 5.4%, and 1.7%, respectively (Oficina Nacional de Estadística e Información, 2013, p. 17).

Production

Production data for many mineral commodities produced in Cuba, as well as for other countries of the Caribbean, are not available on an annual basis. Estimates of production that may represent a significant change in volume percent in 2012 compared with that of 2011 were made, in some cases, by looking at trends of data that extend to years prior to the period covered in this report. Large variations in production of industrial minerals and construction materials are common in

many countries and tend to reflect macroeconomic trends but also may reflect the variability of domestic demand. In some cases, an estimate was made when a percentage increase or decrease of a commodity's production relative to 2011 was known, although the exact production total was not given. Data on mineral production are in table 1.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Mineral Trade

Venezuela was Cuba's leading trade partner in terms of value in 2011 (the most recent year for which data were available) followed by China, Canada, and Spain. Cuba was a net importer in 2011 with total exports valued at about \$261 million and imports valued at about \$603 million. Cuba's trade deficit had begun to increase significantly in the early- and mid-2000s. In 2008, the trade deficit increased drastically to about \$450 million, or by 65.3% compared with that of 2007 as the global economic recession was underway; in the 2 years before and after 2007, however, the trade deficit was relatively stable at an average value of about \$270 million. The deficit increased in 2011 to about \$342 million, or by 29% compared with that of 2010 (Oficina Nacional de Estadística e Información, 2012).

At the same time that the trade deficit was expanding, the volume of mineral industry exports was variable, and reflected global economic trends. Available data since 2006 indicate that the mineral commodity price boom of the mid-2000s led to a 55% increase in mineral commodity exports (which included cobalt, nickel, crude petroleum, and petroleum refinery products) in 2007 to about \$90 million (or 46% of total exports) compared with those of 2006. By 2009, the value of mineral exports had decreased to just \$36 million (or 29% of total exports) as the effects of the global economic recession were felt. By 2011, the value of mineral exports had increased by 23% compared with that of 2010 to about \$61 million; that value was still only 23% of total exports, however, which indicates that the value of mineral commodities traded had increased relative to other goods (Oficina Nacional de Estadística e Información, 2012).

Outlook

Cuba's economic growth in 2013 was expected to remain constant at 3.0%. The closures of the Nicaro nickel mine and plant was not expected to have a significant effect on the country's cobalt and nickel production because the operation's production volume had dwindled in recent years. Several exploration-stage projects in Cuba have not been reported on in at least the past 5 years, but they are thought still to have been active. Those projects were exploring for nickel and associated cobalt, copper, gold, and zinc.

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DOMINICAN REPUBLIC

The Dominican Republic's real GDP increased by 3.9% in 2012 compared with a growth rate of 4.5% in 2011. The positive (although decreased) growth was primarily attributable to growth in sectors that produced beverages and tobacco (9.3%), energy and water (7.3%), financial services (7.3%), sugar (5.1%), and agricultural products (4.1%). The inflation rate was 3.9% compared with 7.8% in 2011, and the rate of foreign direct investment (FDI) increased by 58.7% in 2012 compared with an increase of 25% in 2011. FDI was directed primarily towards commerce, manufacturing, mining and energy, and real estate (Banco Central de la República Dominicana, 2012, p. 9).

In February 2012, Glencore International plc of Canada announced a merger by which Glencore would acquire the 65.92% of Xstrata plc of Switzerland that it did not already own to form Glencore-Xstrata plc, which was headquartered in Switzerland. The merger resulted in a new ownership regime at the Falcondo Dominicana C. por A. (Falcondo) nickel operation in Bonao, including Glencore-Xstrata (85.3%), the Government of the Dominican Republic (10%), Franco-Nevada Corp. of the United States (4.1%), and a private interest (0.6%).

The Dominican Republic was estimated to be the world's 12th-ranked nickel-producing country in 2012. Xstrata Nickel (a subsidiary of Glencore-Xstrata) had halted operations at Falcondo in 2010 because of high energy costs and diminished market conditions. The facility restarted production in 2011, and during 2012, the facility operated at about 50% of capacity. The largest mining project in the Dominican Republic in 2012 was Pueblo Viejo Dominicana Corp.'s Pueblo Viejo gold and silver mine (Barrick Gold Corp., 60%, and Goldcorp Inc., 40%, both of Canada). Commercial production at the mine started in the third quarter of 2012 (Kuck, 2013).

Minerals in the National Economy

The year-on-year value contributed to the GDP from the mining and quarrying sector increased by 42% in 2012 compared with 79.7% in 2011. The large increase between 2010 and 2011 was a result of the restarting the Falcondo nickel operation. The growth between 2011 and 2012 was a result of the startup of commercial production of gold and silver at Pueblo Viejo. The value of activity in the mining and quarrying sector contributed just 0.5% of the total value of the GDP in 2011 compared with 0.4% in 2010 (Banco Central de la República Dominicana, 2012, p. 12).

Production

Data on mineral production are in table 1.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Mineral Trade

Continuing global economic uncertainty had a negative effect on exports in the Dominican Republic. The decreased external demand resulted in decreased prices for mineral commodities, including crude petroleum, copper, and nickel, and for traditional exports, including coffee and sugar. Nonetheless, the country's exports increased by 5.4% to \$9.08 million compared with that of 2011. In 2012, the Dominican Republic reportedly exported 40,116 metric tons (t) of ferronickel valued at about \$267.3 million compared with 33,894 t valued at \$290 million in 2011, which reflected a 33.3% decrease in price per ton in 2012. The country exported 26,052 kilograms (kg) of dore in 2012 compared with a revised 15,587 kg in 2011; 23,015 kg of silver compared with a revised 15,099 kg in 2011; and 3,037 kg of nonmonetary gold compared with a revised 488 kg in 2011 (Banco Central de la República Dominicana, 2012, p. 29, 69).

Commodity Review

Metals

Copper.—In January, Perilya Ltd. of Australia, which was majority owned by Zhongjin Lingnan Nonfemet Co. Ltd. of China (53.37%) continued operations at its Cerro de Maimón Mine in Bonaó. The Cerro de Maimón Mine started up in 2009 and was the only polymetallic mine operating in the Dominican Republic in 2012 until commercial production started up at Pueblo Viejo. The Cerro de Maimón deposit is a strata-bound copper- and zinc-rich exhalative volcanogenic massive-sulfide lens with a gold-and-silver-bearing oxide cap. The Cerro de Maimón Mine was an open pit operation that produced about 11,500 t of copper, 430 kg of gold, and 11,250 kg of silver in 2012 compared with 11,700 t of copper, 490 kg of gold, and 18,000 kg of silver in 2011. As of October 2011, total reserves and resources at Cerro de Maimón included 150,000 t of contained copper, about 9,000 kg of gold, 260,000 kg of silver, and 104,000 t of zinc. As of August 2012, Perilya announced a resource update for Cerro de Maimón, including total reserves and resources of 6.5 Mt grading 29.34 grams per metric ton (g/t) silver, 2.395% Zn, 0.772 g/t gold, and 0.963% copper (Perilya Ltd., 2012a, p. 17; 2012b; 2013).

The plant at Cerro de Maimón had a primary crushing and conveying system for both the sulfide and oxide ores. The sulfide ore was processed through both primary and secondary ball mills and a flotation circuit to produce the copper concentrate. The oxide ore was processed through a ball mill and conventional cyanide-leaching unit for gold and silver recovery (Perilya Ltd., 2012a, p. 18, 27).

Gold.—In August 2012, Pueblo Viejo achieved its first gold production. Further commissioning activities and ramping up to commercial production continued to mid-January 2013. In 2012, Pueblo Viejo produced about 3,480 kg of gold. As of February 2012, the proven and probable reserves at Pueblo Viejo included about 800,000 kg of contained gold, 5 million kilograms of contained silver, and 257,000 t of contained copper. The mine

was expected to produce about 35,000 kilograms per year of gold in the first 5 years of a 25-year mine life from about 13 million metric tons (Mt) of ore representing about 175,000 kg of contained gold (Goldcorp Inc., 2012).

Nickel.—Falcondo was an open pit mine that had the capacity to produce 29,000 metric tons per year of nickel contained in ferronickel. In 2012, the mine produced 15,186 t of nickel from ferronickel production. The ore was mined, milled, smelted, and refined at Falcondo to produce a ferronickel cone that contained about 38% nickel. The facility included four mines, a metallurgical treatment plant, a crude oil refinery that had been idled, and a 200-megawatt-capacity thermal powerplant. Total reserves and resources as of yearend 2011 included 965,000 t of contained nickel in proven and probable reserves and 69,000 t of contained nickel in inferred resources (Xstrata plc, 2011, p. 36; 2013).

The Loma Caribe peridotite, which hosts the Falcondo nickel laterite deposit, contains the main belt of ophiolitic peridotites in the Central Cordillera of the Dominican Republic. The serpentinitized peridotites, which are composed primarily of harzburgite with subordinate dunite and lherzolite, gave rise to the nickel laterite soils when they were exposed to weathering and erosion in the early Miocene Epoch. The main nickel-bearing minerals are garnierite and serpentine (Tauler and others, 2009).

Outlook

By February 2013, it was reported that the Government of the Dominican Republic was attempting to renegotiate the terms of its contract in order to earn more from the profits of the mine. It was unclear whether any changes would be implemented. In 2012, the Government had also responded to protests concerning continued exploration by Glencore-Xstrata in the Loma Miranda area of the Falcondo site. By January 2013, it was reported that the United Nations Development Programme would evaluate the environmental impact study for Falcondo and release its findings in April 2013.

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JAMAICA

In 2012, Jamaica's economy slipped into recession as a result of weak domestic demand and the effects of Hurricane Sandy, which was estimated to have caused about \$54.3 million worth of damage, including \$16.3 million of losses to the agricultural sector, \$1.8 million in damages to schools, and \$1.7 million in damages to health facilities. The Government of Jamaica was seeking to renew financing with the International Monetary Fund. Jamaica was estimated to be the world's seventh-ranked producer of bauxite after Australia, China, Brazil, Indonesia, India, and Guinea. Other mineral commodities produced in Jamaica included alumina, cement, gypsum, lime, petroleum refinery products, sand and gravel, shale, silica sand, and stone (Bray, 2013; Central Bank of Trinidad and Tobago, 2013, p. 9).

Minerals in the National Economy

The quarterly values of the mineral sector's contribution to the GDP (in terms of value added at constant 2007 prices) in fiscal year 2012 were about \$48.9 million, \$49.2 million, \$43.9 million, and \$44 million, respectively, and together accounted for an averaged 2.3% of the value added to the GDP for the fiscal year. FDI inflows to the mineral sector in 2011 (the most recent year for which data were available) amounted to \$29.2 million compared with \$20.0 million in 2010 (Bank of Jamaica, 2013b, p. 114, 154).

Production

Jamaica produced about 9.4 Mt of bauxite in 2012, which was a decrease of 8.3% compared with production in 2011. The country produced about 1.8 Mt of alumina in 2012, which was a 10.3% decrease compared with that of 2010 (table 1).

Mineral Trade

The total value of goods exported from Jamaica in the first 9 months of 2012 was about \$1.4 billion compared with about \$1.3 billion for the same period of 2011. In 2011 (the most recent year for which data were available), the value of unspecified crude material exports was \$769 million compared with \$556 million in 2010, and the value of mineral fuel exports was about \$187 million compared with about \$157 million in 2010.

The total value of goods imported into Jamaica in the first 9 months of 2012 was about \$5.1 billion compared with about \$4.9 billion for the same period of 2011. In 2011 (the most recent year for which data were available), the value of unspecified crude materials was about \$60.8 million compared with \$54.9 million in 2010, and that of mineral fuels was about \$2.4 billion compared with about \$1.6 billion (Bank of Jamaica, 2012; 2013b, p. 110–115).

Outlook

By the end of the second quarter, the production of alumina and crude bauxite decreased by 1.4% and 1.3%, respectively, compared with the same period in 2012. Cement production decreased by 21.7% in the same period. Production of petroleum refinery products increased by the end of the second quarter. Production of diesel and fuel oils increased by 9.4%, that of gasoline increased by 8.8%, and that of turbo fuel and kerosene combined increased by 22.6%. The Petrojam refinery had been shut down during the month of May 2012 for repairs, so it had been expected that petroleum product production could increase in 2013 (Bank of Jamaica, 2013a; 2013b, p. 153).

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TRINIDAD AND TOBAGO

In 2012, the mineral industry of Trinidad and Tobago relied upon production from its hydrocarbon sector and production and manufacturing of iron and steel. As of 2009 (the most recent year for which data were available), the country was known to have 69 active quarries (public and private), among which were 31 sand and gravel quarries. Andesite was the primary material quarried in Tobago (Ministry of Energy and Energy Affairs, 2009).

Minerals in the National Economy

Trinidad and Tobago evaluates its own economic performance in terms of the energy and nonenergy sectors. Economic growth declined in the country in the first half of the year as a result of prolonged maintenance work in the energy sector combined with decreased crude oil and natural gas production. Nonenergy sector production was negatively affected by a strike at a cement plant, which, in turn, negatively affected the construction and manufacturing industries. Preliminary quarterly data indicate that after four consecutive quarters of contraction, the energy sector expanded by 0.5% in the third quarter of 2012 as increased production of natural gas and liquefied natural gas offset declines in petroleum and petrochemical output, but did not offset annual production decreases. The nonenergy sector grew by 2.2% in the third quarter of 2012 after three quarters of decreasing growth, which had been aggravated by the cement industry strike. For the first 9 months of 2012, economic activity in Trinidad and Tobago was estimated to have decreased by 0.5% relative to the same period in 2011 (Central Bank of Trinidad and Tobago, 2012, p. 9; 2013, p. 2)

Production

Production of crude oil and natural gas decreased by 18.4% and 11.3%, respectively, in 2012 compared with that of 2011. Decreased petroleum production from already dwindling reserves was exacerbated by maintenance and decreased drilling days. Refinery throughput was 21.5% lower between July and November than in the first half of the year because of maintenance issues and civil unrest resulting in significant decreases in the output of motor gasoline and kerosene. The decrease in natural gas production resulted in reduced production of petrochemicals. Production of direct-reduced iron also decreased in the third quarter of 2012 compared with the same quarter of 2011 as a result of a mechanical failure at a plant (Central Bank of Trinidad and Tobago, 2012, p. 20; 2013, p. 13–14).

Mineral Trade

Trade data for 2012 were not available, but updated 2011 data were provided by the Central Bank of Trinidad and Tobago. The United States was Trinidad and Tobago's leading trading partner, having purchased 47.8% Trinidad and Tobago's exports in 2011 and having provided 26.6% of its imports. Imports to Trinidad and Tobago from Latin America, however, were increasing whereas those from the United States were decreasing. The value of all Trinidad and Tobago's exported minerals, fuel, lubricants, and unspecified related materials combined was \$699.4 million compared with \$577.9 million in 2010. The value of all minerals, fuel, lubricants, and unspecified related materials imported by Trinidad and Tobago was \$3.7 billion compared with \$2.1 billion in 2010. In 2011, exports of refinery products increased by about 17% to 41 million barrels (Mbbbl) compared with those of 2010, and exports of crude oil decreased by about 17% to 14 Mbbbl. About 15 Mbbbl of exported natural gas liquids,

5.8 Mt of methanol, 4.6 Mt of ammonia, and 636,000 t of urea were exported in 2011 (Central Bank of Trinidad and Tobago, 2011, p. 7, 39–40; 2012, p. 17).

Outlook

In the first two months of 2013, crude oil production totaled 4.9 Mbbbl, which was a 1.8% decrease compared with the same period in 2012. Natural gas production, however, increased by 2.8% to 7.5 billion cubic meters. According to the Central Bank, economic growth in Trinidad and Tobago for 2013 was projected to be 2.5%. Energy sector production was expected to rebound after 2 years of contraction simply because significant facilities maintenance programs that require down time were not expected in 2013 as had been the case in 2011 and 2012. Some maintenance programs, however, were expected in the third quarter (Central Bank of Trinidad and Tobago, 2013, p. 4).

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OTHER ISLANDS OF THE CARIBBEAN

The economies of the other islands of the Caribbean did not depend upon domestic mineral production for purposes of trade or economic growth, and mineral production data were unavailable.

TABLE 1
ISLANDS OF THE CARIBBEAN: PRODUCTION OF MINERAL COMMODITIES^{1, 2, 3}

(Metric tons unless otherwise specified)

Country and commodity	2008	2009	2010	2011	2012 ^c
CUBA ⁴					
Bentonite	382	670	228	1,244	670
Cement, hydraulic	1,705,200	1,625,700	1,631,400	1,736,300 ^r	1,833,400 ⁵
Cobalt, mine output, Co content	4,430 ^r	4,820 ^r	4,850 ^r	4,750 ^r	4,600
Feldspar	4,300	4,700	2,800	3,100	3,800
Gypsum	thousand metric tons	110	78	111	131
Kaolinite ^c	2,000	2,000	100 ⁵	300 ^r	400
Lime	49,900	46,000	49,700	38,000	54,100
Limestone	thousand metric tons	1,500	2,900	2,600	2,700
Marble	cubic meters	3,800	5,200	4,300	6,700
Natural gas, marketed	thousand cubic meters	1,161,000	1,155,300	1,072,500	1,019,800
Nickel, Ni content	68,800 ^r	68,600 ^r	58,000 ^r	57,600 ^r	54,000
Nitrogen, N content of ammonia	41,700	27,200	36,000	45,200	59
Petroleum:					
Crude	thousand 42-gallon barrels	19,367	17,614	19,507	19,000
Refinery products: ⁶					
Asphalt	metric tons	61,600	80,200	86,900	79,600
Petroleum coke	thousand 42-gallon barrels	34	18	41	37
Gasoline, motor	do.	6,109	4,197	4,844	4,286
Kerosene	do.	325	182	2	28
Liquefied petroleum gas	do.	652	537	691	585
Lubricants	do.	377	277	342	358
Naphtha	do.	490	1,376	736	1,341
Total	do.	69,588 ^r	86,788 ^r	93,555 ^r	86,235 ^r
Salt	thousand metric tons	157	266	272	281
Sand, calcareous	thousand cubic meters	1,827	1,693	1,686	1,785
Silica sand	cubic meters	29,100	16,400	11,100	16,300
Stone, crushed	thousand cubic meters	3,568	3,416	3,234	3,542
Steel		273,800	265,800	277,600	282,100
Sulfuric acid	thousand metric tons	412	423	423	417
Volcanic ash		34,600	62,100	72,300	96,500
Zeolites		20,400	25,800	30,900	44,600
DOMINICAN REPUBLIC ⁷					
Cement, hydraulic		4,206,612	3,852,176	4,105,657	3,996,500
Clay	cubic meters	113,770	229,478	51,250	17,050
Copper, mine output, Cu content		2,109 ^r	12,937 ^r	10,015 ^r	11,777 ^r
Gold, mine output, Au content	kilograms	47 ^r	425 ^r	533	495
Gypsum	cubic meters	177,982	67,928	53,800	31,177
Nickel, Ni content:					
Mine output, laterite ore		31,300	500	--	1,143,000
Metal, Ni contained in ferronickel, smelter		18,782	--	--	13,498
Sand:					
Calcareous	cubic meters	137,488	206,000	163,000	27,500
Silica	do.	9,600	4,000	19,652	20,518
Silver, mine output, Ag content	kilograms	3,732 ^r	23,119 ^r	22,815 ^r	18,169 ^r
Stone:					
Marble	cubic meters	4,279 ^r	3,678 ^r	5,336 ^r	6,137 ^r
Dolomite	do.	3,000	4,000	3,500	3,000
Limestone	do.	2,975,541	2,168,958	2,123,317	2,619,099
Pozzolan	do.	122,483	71,957	101,311	91,933
Travertine	do.	3,881	3,028	324	1,001

See footnotes at end of table.

TABLE 1—Continued
ISLANDS OF THE CARIBBEAN: PRODUCTION OF MINERAL COMMODITIES^{1, 2, 3}

(Metric tons unless otherwise specified)

Country and commodity	2008	2009	2010	2011	2012 ^e	
JAMAICA ⁸						
Bauxite and alumina:						
Bauxite, dry equivalent, gross weight	thousand metric tons	14,697	7,817	8,540	10,190	9,339 ⁵
Alumina	do.	3,996	1,774	1,591	1,960	1,758 ⁵
Cement, hydraulic		742,529	742,208	723,000	766,000	760,300 ⁵
Gypsum		238,274	230,000	230,000	96,000	100,000
Petroleum refinery products	thousand 42-gallon barrels	8,007 ^r	8,265 ^r	8,146	8,592	8,510
TRINIDAD AND TOBAGO ⁹						
Cement, hydraulic		957,700	870,000	790,900 ^r	827,000 ^r	800,000
Iron and steel:						
Direct-reduced iron		1,601,000	1,181,700 ^r	1,751,800 ^r	1,705,600 ^r	1,500,000
Steel, crude		489,000	417,000	572,000	610,000	608,000
Semimanufactures, billets		489,600	417,000	361,000	467,400	427,200 ⁵
Natural gas, gross ¹⁰	million cubic meters	40,000	42,903	44,565	42,883	38,025 ⁵
Natural gas liquids	thousand 42-gallon barrels	12,720 ^r	15,899 ^r	17,223 ^r	16,043 ^r	12,900
Nitrogen, N content of anhydrous ammonia		5,100,000	4,945,900	5,553,242	5,444,300	4,466,000 ⁵
Petroleum:						
Crude	thousand 42-gallon barrels	43,799	40,821	36,300	33,550 ^{r, e}	27,369 ⁵
Refinery products	do.	50,800	53,300	46,167	50,098	44,900
Urea		700,000	700,000	708,760	616,247	521,000

^eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through June 5, 2013.

²Netherlands Antilles was dissolved in 2010.

³The countries of Aruba, The Bahamas, Barbados, Dominica, Martinique, and St. Kitts and Nevis are known for production of commodities including aragonite, cement, lime, limestone, petroleum refinery products, pumice, salt, sand and gravel, stone and sulfur, but production data has been consistently unavailable for such a length of time, and production volumes have been so small relative to global totals, that production estimates can no longer be made.

⁴In addition to the commodities listed, Cuba also produces crude construction materials (sand and gravel, and so forth), but data on such production are not available, and information is inadequate to make reliable estimates of output.

⁵Reported figure.

⁶Production has been converted from metric tons to barrels by using the U.S. Energy Information Administration's factor of 5.51 barrels per metric ton (bbl/t) for petroleum coke; 8.53 bbl/t for gasoline; 7.73 bbl/t for kerosene; 11.63 bbl/t for liquefied petroleum gas; 7.00 bbl/t for lubricants; and 8.22 bbl/t for naphtha.

⁷In addition to the commodities listed, the Dominican Republic also produces petroleum refinery products.

⁸In addition to the commodities listed, Jamaica also produces clay, gravel, lime, limestone, marble, marle, pozzolan, salt, sand, shale.

⁹In addition to the commodities listed, Trinidad and Tobago also produces limestone, secondary refined lead, and sulfur (byproduct of petroleum).

¹⁰Production from January 1 to November 30.

TABLE 2
ISLANDS OF THE CARIBBEAN: STRUCTURE OF THE MINERAL INDUSTRIES IN 2012

(Metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
ARUBA				
Petroleum, refinery	42-gallon barrels per day	Valero Energy Corp.	Southern Aruba	235,000
BAHAMAS, THE				
Petroleum, refinery	thousand 42-gallon barrels	Bahamas Oil Refining Company International Ltd. (BORCO) (First Reserve Corp., 80%)	Storage facilities, Freeport	20,000
BARBADOS				
Cement		Arawak Cement Company Ltd. (Trinidad Cement Ltd.)	Checker Hall, Saint Lucy	300,000
CUBA				
Cement	thousand metric tons	Cementos Cienfuegos S.A. (Government, 50%, and Las Pailas de Cemento S.A., 50%)	Cienfuegos	1,500
Do.	do.	Fábrica de Cemento 26 de julio	Nuevitas	600
Do.	do.	Fábrica de Cemento Mártires de Artemisa	Artemisa	600
Do.	do.	Cementos Curazao N.V.	Barrio Mujica, Mariel Province	1,110
Do.	do.	Fábrica de Cemento Siguaney	Sancti Spiritus	300
Cobalt	do.	Metals Enterprise S.A. (Government, 50%, and Sherritt International Corp., 50%)	Moa, Holguin Province	3
Nickel	do.	Empresa Niquelífera Ernesto Che Guevara (Government, 100%)	Ernesto Che Guevara Mine Punta Gorda, Holguin Province	33
Do.	do.	Moa Nickel S.A. (Government, 50%, and Sherritt International Corp., 50%)	Pedro Soto Alba Mine, Holguin Province	37
Do.	do.	Empresa Niquelífera Comandante René Ramos Latour (Government, 100%)	Rene Ramos Latour Mine, Nicaro, Holguin Province	12.4
Petroleum:				
Crude	thousand 42-gallon barrels	Empresa de Perforación y Extracción de Petróleo del Centro (Government, 100%)	Northern coast between Havana and Cardenas	12
Do.	do.	Sherritt International Corp. (indirect working interests vary from 40% to 100% in 10 production-sharing contracts with the Government)	Near shore oilfields located at Yumuri, Varadero, Canasi, and Puerto Escondido	7,000
Refinery products	do.	PDV-Cupet S.A. (Government, 51%, and Petróleos de Venezuela S.A., 49%)	Cienfuegos refinery, Cienfuegos, 250 kilometers from Havana	23,725
Do.	do.	Hermanos Díaz	Santiago de Cuba	8,000
Do.	do.	Ñico López Refinery (Government, 100%)	Havana	NA
Sand	thousand metric tons	Algaba quarry	Sancti Spiritus	50
Do.	do.	Malabe quarry	NA	32
Do.	do.	Cajobabo	Imias	NA
Steel	do.	Grupo Metalúrgico Acinox (Government, 100%), including: Antillana de Acero	Cotorro, Havana Province	600
Do.	do.	Empresa de Aceros Inoxidables	Las Tunas, Las Tunas Province	370
Do.	do.	4 other steel plants	NA	NA
Zeolites		Empresa Geominera Oriente	Holguin Province	58
DOMINICAN REPUBLIC				
Copper		Perilya Ltd. (Zhongjin Lingnan Nonfemet Co. Ltd., 53.37%)	Bonao	15,000
Gold	kilograms	do.	do.	600
Do.	do.	Barrick Gold Corp., 60%, and Goldcorp Inc., 40%	Pueblo Viejo	33,000
Nickel		Falconbridge Dominicana C. por A. (Glencore-Xstrata plc, 85.3%; Government, 10%; Franco-Nevada Corp., 4.1%; private interests, 0.6%)	do.	29,000
Petroleum, refinery	42-gallon barrels per day	Refinería Dominicana de Petróleo S.A. (Government, 50%, and Shell International Petroleum Company Ltd., 50%)	Haina Port	34,000
Silver	kilograms	Perilya Ltd. (Zhongjin Lingnan Nonfemet Co. Ltd., 53.37%)	Bonao	15,000

See footnotes at end of table.

TABLE 2—Continued
ISLANDS OF THE CARIBBEAN: STRUCTURE OF THE MINERAL INDUSTRIES IN 2012

(Metric tons unless otherwise specified)

Country and commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
JAMAICA			
Alumina	Alumina Partners of Jamaica (ALPART) (United Company RUSAL, 65%, and Hydro Aluminium Jamaica, 35%)	Refinery, Nain, St. Elizabeth	1,650,000
Do.	West Indies Alumina Co. (WINDALCO) (United Company RUSAL, 93%, and Government, 7%)	Ewarton Works refinery, Saint Catherine	650,000
Do.	do.	Kirkvine Works refinery, Manchester	600,000
Do.	Jamaica Aluminum Co. (Jamalco) (Alcoa World Alumina and Chemicals, 55%, and Government, 45%)	Refinery at Halse Hall, Clarendon, 70 kilometers west of Kingston	1,480,000
Bauxite	St. Ann Bauxite Company Ltd. (Noranda Aluminum Holding Corp., 49%, and Government., 51%)	Bauxite mine, Discovery Bay	4,500,000
Do.	Jamaica Aluminum Co. (Jamalco) (Alcoa World Alumina and Chemicals, 55%, and Government, 45%)	Bauxite mine, Manchester	3,700,000
Do.	West Indies Alumina Co. (WINDALCO) (United Company RUSAL, 93%, and Government, 7%)	Bauxite mine, Schwallenburgh, Ewarton	2,300,000
Do.	do.	Bauxite mine, Russell Place	2,000,000
Do.	Alumina Partners of Jamaica (ALPART) (United Company RUSAL, 65%, and Hydro Aluminium Jamaica, 35%)	Bauxite mine, Nain, St. Elizabeth	5,000,000
Petroleum, refinery	42-gallon barrels per day Petrojam Ltd. (Government, 100%)	Kingston Port	36,000
TRINIDAD AND TOBAGO			
Ammonia	Tringen I (Government, 51%, and Norsk Hydro ASA through Hydro Agri Trinidad Ltd., 49%)	Point Lisas Industrial Estate	500,000
Do.	Tringen II (Government, 51%, and Norsk Hydro ASA through Hydro Agri Trinidad Ltd., 49%)	do.	454,000
Do.	YARA Trinidad Ltd. (Government, 51%, and Norsk Hydro ASA through Hydro Agri Trinidad Ltd., 49%)	do.	227,000
Do.	PCS Nitrogen (Trinidad) Ltd. (Potash Corporation of Saskatchewan, Inc., 100%), of which: Plant 1 Plant 2 Plant 3 Plant 4	do.	1,758,000 (454,000) (454,000) (250,000) (600,000)
Do.	Caribbean Nitrogen Company I (a consortium of Clico Energy Company Ltd., Ferrostaal AG, Duke Energy Corp., BOG Resources Inc., and Kellogg, Brown, and Root, Inc.)	do.	660,000
Do.	Caribbean Nitrogen Company II (a consortium of Clico Energy Company Ltd., Ferrostaal AG, Duke Energy Corp., BOG Resources Inc., and Kellogg, Brown, and Root, Inc.)	do.	660,000
Do.	Point Lisas Nitrogen Ltd. (formerly Farmland Misschem) (Mississippi Chemicals, 50%, and KOCH Minerals Services LLC, 50%)	do.	600,000
Iron and steel	Mittal Steel Point Lisas Ltd. (formerly Caribbean Ispat Ltd.) (Mittal Steel Group), of which: Direct-reduced iron pellets Billets Wire rods	Point Lisas, Couvas	2,200,000 (900,000) (700,000) (600,000)

See footnotes at end of table.

TABLE 2—Continued
ISLANDS OF THE CARIBBEAN: STRUCTURE OF THE MINERAL INDUSTRIES IN 2012

(Metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
TRINIDAD AND TOBAGO—				
Continued				
Liquefied natural gas		Atlantic LNG Company of Trinidad and Tobago Train 1 (BP Trinidad and Tobago LLC, 34%; British Gas Trinidad and Tobago Ltd., 26%; Repsol YPF, S.A., 20%; Tractobel Trinidad LNG Corp, 10%; National Gas Company of Trinidad and Tobago, 10%)	Point Fortin	NA
Do.		Trains 2 and 3 (BP Trinidad and Tobago LLC, 42.5%; British Gas Trinidad Ltd., 32.5%; Repsol YPF, S.A., 25%) [Clico Energy Company Ltd. (a subsidiary of a local insurance conglomerate), Ferrostaal AG, and Methanex Corp.]	do.	NA
Do.		Atlas plant (Methanex Corp., 100%)	do.	NA
Do.		New Methanol Holdings M5 Plant	do.	NA
Natural gas liquids	42-gallon barrels per day	Phoenix Park Gas Processors Ltd. (National Gas Company of Trinidad and Tobago, 51%)	Port of Spain	33,500
Petroleum:				
Refinery	do.	Petroleum Company of Trinidad and Tobago Ltd. (Petrotrin) (Government, 100%)	Pointe-a-Pierre	175,000
Crude	do.	BHP Billiton Ltd., 45%; Total S.A., 30%; Chaoyang, 25%	Greater Angostura oilfield	100,000
Urea		PCS Nitrogen Trinidad Ltd. (Potash Corporation of Saskatchewan, Inc., 100%)	do.	530,000

Do., do. Ditto. NA Not available.