



# 2014 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, DOMINICAN REPUBLIC, HAITI, JAMAICA, TRINIDAD AND TOBAGO, AND OTHER ISLANDS

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### ARUBA

Mining did not play a significant role in Aruba's economy. In 2014, the country's GDP increased by 1.2% compared with that of 2013. Valero Energy Corp. of the United States suspended operations at Valero Refining Company-Aruba NV's Valero Aruba refinery in 2012. The company announced that the 235,000-barrel-per-day refinery was operating far below capacity owing to inadequate profit margins, which was resulting in financial losses. In May, the company reported that it would abandon its refinery assets, but it would continue operations at its crude oil and refined products terminal (Valero Energy Corp., 2012; 2014, p. 5, 7; Central Bank van Aruba, 2015, p. xii).

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### DOMINICAN REPUBLIC

In 2014, bauxite, gold, and silver were the mineral commodities that were the most significant to the Dominican Republic's economy. The country also produced copper and such industrial minerals as clay, gypsum, limestone, pozzolan, and calcareous and silica sand. The Dominican Republic's real gross domestic product (GDP) increased by 7.3% in 2014 compared with that of 2013. The growth in the GDP was attributed to a 20% increase in the output of the mining and quarrying sector and a 14% increase in the output of the construction sector. The increase in the mining and quarrying sector was mostly attributable to an increase in gold and silver production in 2014. As of October 2014, 10,453 people were employed in the mining and quarrying sector. Foreign direct investment (FDI) in the mining and quarrying sector amounted to about \$4.0 million in 2014 compared with \$93.0 million in 2013 and accounted for about 2% of the total FDI in the country (Banco Central de la República Dominicana, 2015a, p. 9, 12; 2015e).

The country's mineral sector is regulated by the Mining Law No. 146 of June 4, 1971. According to the law, exploration and mining concessions or contracts are awarded by the Government. An exploration concession gives an exclusive right for a period of 3 years and a mining concession gives the right for a period of 75 years. The Ministerio de Energia y Minas (MEM) was created by law No. 100-13 of July 30, 2013, and is responsible for administering Government policy in the energy and mining sectors. The Viceministerio de Minas, which is under the MEM, is the agency responsible for regulating, auditing, promoting, and developing the mining sector (Ministerio de Energia y Minas, 2015a, p. 10; 2015b, c).

### Production

In 2014, production of bauxite increased by 88% to 1.4 million metric tons (Mt) from 769,530 metric tons (t) in 2013; gypsum production increased by 69% to 151,936 cubic meters from 90,111 cubic meters (revised) in 2013; silver, by 63% to 127,712 kilograms (kg) from 78,228 kg (revised); gold, by 34% to 35,081 kg from 26,084 kg (revised); marble, by 29% to 3,156 cubic meters from 2,444 cubic meters, and cement, by 13% to 4.8 Mt from 4.2 Mt (revised). Production of clay, limestone, travertine, dolomite, and copper decreased by 52%, 49%, 26%, 25%, and 11%, respectively. Data on mineral production are in table 1.

### Structure of the Mineral Industry

Table 2 lists major mineral industry facilities in the country.

### Mineral Trade

In 2014, the total value of the Dominican Republic's exports increased by 5% to \$9.9 billion compared with about \$9.4 billion (revised) in 2013. The increase in exports was attributed to an increase in the export value of silver and gold, by 39% and 29%, respectively. In 2014, the total value of gold exports accounted for about 15% of the total value of exports and silver exports accounted for about 1%. Silver exports totaled 135,562 kg compared with 78,726 kg (revised) in 2013, and nonmonetary gold exports totaled 37,039 kg compared with 27,022 kg in 2013. The total value of the Dominican Republic's imports increased by 1% to \$13.8 billion compared with about \$13.6 billion in 2013. These imports included about \$938.0 million worth of crude oil or about 9.7 million barrels (Mbbbl), about \$282 million worth of natural gas,

and about \$77 million worth of carbon (Banco Central de la República Dominicana, 2015c, d, f).

The country's exports to the United States were valued at about \$4.5 billion in 2014 compared with about \$4.3 billion (revised) in 2013. These included about \$106 million worth of nonmonetary gold, about \$105 million worth of liquefied petroleum gases, about \$13.0 million worth of bauxite, and about \$3.0 million worth of copper. Imports from the United States were valued at about \$7.9 billion in 2014 compared with about \$7.2 billion in 2013; these included about \$1.0 billion in fuel oil, \$485 million in natural gas liquids, \$373 million in petroleum products, and \$40.0 million in excavating machinery (U.S. Census Bureau, 2015a, b).

## Commodity Review

### Metals

**Bauxite and Alumina.**—Dovemco, S.A. was the sole producer of bauxite in the country. The company mined bauxite from Las Mercedes deposit in Pedernales Province, which had estimated reserves of about 4.2 Mt at an average grade of about 46% aluminum oxide and a projected mine life of about 4 years. The extracted material was transported to the Port of Cabo Rojo to be shipped. China, which was a major export partner, received eight shipments in 2014, followed by Canada, which received one shipment. In 2014, exports of bauxite increased by 50% to about 1.16 million metric dry tons, which was valued at about \$6.9 million. Historically, Alcoa Exploration Co. of the United States had operated Las Mercedes between 1959 and 1982 and exported more than 22.3 million metric wet tons during that period of time (El Nuevo Diario, 2013; Direccion General de Minería, 2015a, p. 1, 3; 2015b, p. 3; Dovemco, S.A., 2015).

**Gold.**—The Pueblo Viejo Mine was owned jointly by the Canadian companies Barrick Gold Corp. (60% interest) and GoldCorp Inc. (40% interest) through Pueblo Viejo Dominicana Corp. The open pit mine, which began commercial production in 2013, had an estimated capacity of about 32,000 kg of gold and is located about 100 kilometers (km) northwest of Santo Domingo. In 2014, Pueblo Viejo produced 31,423 kg of gold compared with 23,053 kg in 2013. The joint venture expected gold production to be between 29,600 kg and 32,200 kg in 2015 (Barrick Gold Corp., 2015a, p. 28; 2015b; GoldCorp Inc., 2015a, p. 28; 2015b).

GoldQuest Mining Corp. of Canada, through its subsidiary Gold Quest Dominicana, owned 100% interest in the Romero gold-copper project, which is located in San Juan Province within La Escandalosa exploration concession. The project included the Romero and the Romero Sur deposits. In May, the company announced the completion of its preliminary economic assessment (PEA) and reported that the project had the capacity to be developed as an underground mine with a mine life of 15 years; also, that the mine would have an estimated average annual production of about 2,600 kg of gold and about 7,080 t of copper. As of October 2013, indicated and inferred mineral resources at Romero were estimated to be 19.4 Mt at average grades of 2.63 grams per metric ton (g/t) gold, 3.7 g/t silver, 0.63% copper, and 0.29% zinc, and 10.0 Mt at average grades of 1.64 g/t gold, 3.8 g/t silver, 0.36% copper, and 0.42% zinc,

respectively. Exploration work was underway and the company expected to complete a revised PEA in June 2015. GoldQuest held a total of 23 exploration concessions within the Districts of Jarabacoa and San Juan (GoldQuest Mining Corp., 2014a, b; 2015, p. 3, 7–8).

**Nickel.**—Falconbridge Dominicana S.A. (Falcondo) was placed on care-and-maintenance status in 2013 and remained so in 2014. Falcondo was jointly owned by Glencore plc of Switzerland (85.3%), the Government of the Dominican Republic (10%), Franco-Nevada Corp. of the United States (4.1%), and a private interest (0.6%). Falcondo, which is located in Loma La Peguera, Bonaó, had the capacity to produce 29,000 metric tons per year (t/yr) of nickel in ferronickel. Measured and indicated resources at Falcondo were reported as 71.6 Mt at an average grade of 1.47% nickel, and inferred mineral resources were reported as 4.9 Mt at an average grade of 1.4% nickel. Total nickel ore reserves were estimated to be 71.2 Mt at an average grade of 1.31% nickel (Glencore plc, 2015, p. 55, 72–73, 186).

### Outlook

The Dominican Republic was forecast to have a 5.5% increase in GDP in 2015 (International Monetary Fund, 2015, p. 173). Most likely, gold and silver will remain the leading mineral products in the country, in terms of production value. According to the Government, bauxite mining could be extended until 2016 if customers would purchase bauxite with a silica content in excess of 6%. Scheduled maintenance at the Pueblo Viejo Mine was likely to affect gold and silver production in 2015. Falcondo is expected to remain on care-and-maintenance status in 2015 (Banco Central de la República Dominicana 2015b, p. 11; Direccion General de Minería, 2015a, p. 3–4).

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## HAITI

Haiti occupies the western part of the Island of Hispaniola and possesses economic mineral deposits similar to those of the Dominican Republic, but it has remained largely undeveloped. The country's undeveloped mineral resources included copper, gold, and silver. The country's GDP increased by 2.8% in 2014 compared with 4.2% in 2013. 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. According to the World Bank, the country's mining sector was constrained by an outdated legal framework, weak institutional capacity, and the widespread lack of information about the sector (World Bank, The, 2013; Institut Haitien de Statistique et d'Informatique, 2014; Eurasian Minerals Inc., 2015).

Prospecting, exploring, or exploiting mineral and energy resources requires concessions and permits from Le Bureau des Mines et de l'Energie (the Bureau of Mining and Energy), which is under the Ministère des Travaux Publics, Transports et Communications (Ministry of Public Works and Communications). In 2013, the Government suspended its Mining Convention process and requested the assistance of the World Bank in its efforts to review the country's Mining Law (Decree No. 19 of March 8, 1976). Consultation meetings were underway in 2014 with the Government, the World Bank, mining companies, the business community, and civil social representatives to present comments on draft versions of the new mining law (U.S. Department of State, 2014; Eurasian Minerals Inc., 2015).

Cimenterie Nationale S.E.M. (CINA) was the only cement producer in the country and had the capacity to produce 850,000 t/yr. CINA was a subsidiary of Cementos Argos S.A. of Colombia and was located in Cabaret. Since 2013, Eurasia Minerals Inc. of Canada and its joint-venture partner Newmont Mining Corp. of the United States continued to keep projects on care-and-maintenance status while revisions to the mining law were pending. The joint venture had an exploration program along a 130-km trend of Haiti's Massif du Nord belt. The joint venture covered six exploration areas, which included La Miel, La Mine, Northwest Haiti, and Northeast Haiti. Eurasia Minerals also held 100% interest in the Grand Bois gold-copper project, which also was on care-and-maintenance status since 2013. Since 2013, at least two other companies were engaged in exploration for copper, gold, and silver in the country—Majestor Resources Inc. of Canada and VCS Mining of the United States (Eurasian Minerals Inc., 2015).

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## JAMAICA

Jamaica's mineral industry was dominated by bauxite and alumina production. In 2014, the country was estimated to be the world's sixth-ranked producer of bauxite, accounting for about 4% of world production. Industrial minerals produced in the country included gypsum, lime, limestone, pozzolan, sand and gravel, shale, and silica sand. The country also produced petroleum refinery products. In 2014, Jamaica's GDP increased by 0.4% compared with that of 2013. Mining and quarrying accounted for 2.0% of the country's GDP. The value of output in the mining and quarrying sector increased by 0.9% in 2014; the growth was attributed to a 2.3% increase in bauxite production. In 2014, about 6,200 people were employed in the mining and quarrying and refining industries compared with about 5,400 people in 2013. FDI inflows in Jamaica totaled \$699.3 million, and mining accounted for about 4% of the total FDI inflows (Bank of Jamaica, 2015a, p. 19, 43, 65; 2015b, p. 114–115; Bray, 2016).

According to the Ministry of Science, Technology, Energy, and Mining, a national mineral policy was being drafted to create the legal framework to attract investments in the mineral sector, and it was expected to be presented in the Parliament during fiscal year 2015–16. The policy included gold and copper prospecting. During 2014, the Canadian companies Carube Resources Inc. and Miocene Metals Ltd. in joint venture with OZ Minerals Ltd. of Australia were engaged in gold and copper exploration at the Bellas Gate project, which was located 40 km northwest of Kingston and covers an area of about 84 square kilometers (km<sup>2</sup>) (C.T. Barrie and Associates, Inc., 2015, p. 4; Ministry of Science, Technology, Energy, and Mining, 2015, p. 6, 31, 32).

### Production

Data on mineral production are in table 1.

### Structure of the Mineral Industry

Bauxite was produced by Alumina Partners of Jamaica (Alpart), Jamaica Aluminum Co. (Jamalco), Noranda Bauxite Ltd., and West Indies Alumina Co. (Winalco). These companies had a combined bauxite production capacity of about 15.2 million metric tons per year (Mt/yr). Alpart, Jamalco, and Winalco also produced alumina; the companies had a combined production capacity of about 4.2 Mt/yr. Trinidad Cement Ltd., through its subsidiary Caribbean Cement Ltd., owned the country's only cement company. Caribbean Cement was located in Rockfort and had the capacity to produce 2.2 Mt/yr of cement. Table 2 lists major mineral industry facilities operating in the country.

The joint venture between the Government (51% interest) and Petroleos de Venezuela S.A. (49%) owned Petrojam Ltd., which

was the sole oil refinery in the country. Petrojam's refinery is located in Kingston Port and had the capacity to produce about 30,000 barrels per day (bbl/d) of petroleum. The joint venture imported crude oil mainly from Mexico and Venezuela, which was converted to such petroleum refinery products as asphalt, liquid petroleum gas, and kerosene. The proposed refinery upgrade project, which was expected to increase the refinery's production capacity to 50,000 bbl/d, was underway in 2014 and was expected to be completed in 2016 or 2017 (Jamaica Observer, 2013a, b; Ministry of Science, Technology, Energy, and Mining, 2014, p. 12).

### Mineral Trade

In 2014, the total value of goods exported from Jamaica was about \$1.5 billion compared with about \$1.6 billion in 2013. Mineral fuels accounted for about 10% of the total value of exports. Bauxite and alumina exports increased by 2.3% to \$672.3 million in 2014 from \$657.3 million in 2013; the increase was attributed to an increase in bauxite production (Bank of Jamaica, 2015a, p. 14; Ministry of Science, Technology, Energy, and Mining, 2015, p. 43).

Jamaica's exports to the United States were valued at about \$285 million in 2014 compared with about \$421 million (revised) in 2013. About 44% of these exports were bauxite and alumina valued at about \$126 million. Imports from the United States were valued at about \$2 billion in 2013, which was about the same as in 2012, and included nearly \$402 million worth of fuel oil and about \$228 million worth of petroleum products (U.S. Census Bureau, 2015a, b).

### Commodity Review

#### Metals

**Bauxite and Alumina.**—In December, Alcoa World Alumina and Chemicals (AWAC) completed the sale of its 55% interest in Jamalco to Noble Group Ltd. of China, after receiving all regulatory approvals. AWAC, which was a joint venture between Alcoa Inc. (60%) and Alumina Ltd. (40%), would continue as Jamalco's managing operator for 3 years. The Government, through its subsidiary Clarendon Alumina Production Ltd., owned the remaining 45% interest. Jamalco had the capacity to produce about 1.8 Mt/yr of bauxite and 1.4 Mt/yr of alumina (Alcoa Inc., 2014; 2015, p. 8).

In December, United Company RUSAL of Russia (UC RUSAL) announced the acquisition of the remaining 7% interest in Winalco. The agreement between the Government and UC RUSAL was signed in May and was part of the company's asset consolidation program. Winalco included two bauxite mines, which were located in Russell Place and Schwallenburg and had the capacity to produce 4.0 Mt/yr, and the Ewarton Works and Kirkvine Works refineries, which had the capacity to produce 1.2 Mt/yr of alumina (United Company RUSAL plc, 2014, 2015, p. 16).

At yearend 2014, the Government reached an agreement with UC RUSAL to resume Alpart's mining operations by the first quarter of 2015 and its refinery operations by the second quarter of 2017. Alpart, which was wholly owned by

UC RUSAL, was located in Nain, St. Elizabeth, and had the capacity to produce about 4.9 Mt/yr of bauxite and 1.6 Mt/yr of alumina. The agreement included the renovation of its port and rail system and the construction of a new power system at the refinery at an investment cost of about \$400 million (Ministry of Science, Technology, Energy, and Mining, 2015, p. 41).

## Outlook

Bauxite and alumina likely will remain the leading mineral products in terms of production value in Jamaica. According to the Bank of Jamaica, the country's economy was forecast to increase between 1.5% and 2.5% in 2015. Growth in mining and quarrying was expected if Alpart resumes operations; the production of bauxite would increase by 14.5% to about 11.1 Mt, and alumina, by 6.0% to about 2.0 Mt in 2015. Bauxite and alumina exports were expected to increase in the short run. The Government's plans to establish a new national mineral policy suggests that the country is attempting to encourage investments in the mineral sector (Bank of Jamaica, 2015a, p. 6; Ministry of Science, Technology, Energy, and Mining, 2015, p. 37, 63).

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## TRINIDAD AND TOBAGO

Trinidad and Tobago was the leading oil and natural gas producer in the Caribbean. In 2014, the country's GDP increased by 0.9% compared with that of 2013. The energy sector accounted for about 42% of the total GDP and about 85% of the total value of the country's exports. Other minerals produced in the country included cement, fertilizers, iron and steel, and such mineral fuels and mineral fuel products as methanol, natural gas liquids, and petroleum refinery products. According to the BP Statistical Review of World Energy (2015), the proven crude oil reserves of Trinidad and Tobago were estimated to be 800 Mbbl and natural gas reserves were estimated to be 0.3 trillion cubic meters. The country also housed one of the Western Hemisphere's largest natural gas-processing facilities—the Phoenix Park Gas Processors Ltd. natural gas liquids complex. In 2014, Trinidad and Tobago was the leading supplier of imported liquefied natural gas (LNG) to the United States, accounting for about 70% of United States LNG imports (U.S. Department of Energy, 2014; BP p.l.c, 2015, p. 6, 20, 28; Central Bank of Trinidad and Tobago, 2015a, p. 49, 62, 64).

The Ministry of Energy and Energy Affairs (MEEA) is the Government entity responsible for the monitoring, enforcement, and regulation of the energy and mineral sectors of Trinidad and Tobago. The state-owned Petroleum Company of Trinidad and Tobago Ltd. (Petrotrin) is engaged in the exploration, development, and production of hydrocarbons and the manufacturing and marketing of petroleum products (Ministry of Energy and Energy Affairs, 2015; Petroleum Company of Trinidad and Tobago Ltd., 2015).

## Minerals in the National Economy

The production of Trinidad and Tobago's energy sector decreased by 2% compared with that of 2013. The decrease was attributed to maintenance works and upgrade activities at British Group Trinidad and Tobago (BGTT) and BP Trinidad and Tobago (BPTT), which were the country's two leading natural gas producers. The decrease in natural gas production affected the refining of LNG and natural gas liquids as well as downstream production of nitrogenous fertilizers. The decrease in production by the energy sector also was attributed to maintenance works at Atlantic LNG Company of Trinidad and Tobago and lower refinery output from Petrotrin. In 2014, about 50,450 workers were employed in the manufacturing sector (included mining and quarrying), which accounted for about 16% of the total workforce of the country, and about 21,300 workers were employed in the petroleum and natural gas sector, which accounted for about 3.2% of the total workforce

(Central Bank of Trinidad and Tobago, 2015a, p. 6, 9, 12; 2015b).

## Production

In 2014, production of crude steel and petroleum refinery products decreased by 21% each. The decrease in petroleum refinery products was attributed to lower output by Petrotrin. Urea production decreased by 10% to 441,817 t from 490,000 t in 2013; the decrease was attributed to maintenance work at the Ammonia Urea Nitrate Melamine and Point Lisas Nitrogen Ltd. plants (table 1).

## Structure of the Mineral Industry

Petrotrin owned the only petroleum refinery in the country, which is located in Pointe-a-Pierre and had the capacity to produce about 168,000 bbl/d. Natural gas liquids were produced by Phoenix Park Gas Processors Ltd., which was 51% owned by state-owned National Gas Company of Trinidad and Tobago (NGC). In October, Consolidated Energy Ltd. acquired Methanol Holdings Trinidad Ltd., which owned the Ammonia urea nitrate melamine complex, at a cost of about \$1.2 billion. The complex was located in the Point Lisas Industrial Estate and had the capacity to produce about 650,000 t/yr of ammonia. Ammonia was also produced by the Caribbean Nitrogen Co. and at the Nitrogen 2000 plant (a consortium among EOG Resources Trinidad Ltd., KOCH Industries, Man Ferrostaal, and Proman Group); by PCS Nitrogen (Trinidad) Ltd. (owned by Potash Corp.); by Point Lisas Nitrogen Ltd. (joint venture between CF Industries Holdings Inc. and KOCH Fertilizer LLC); at Trinidad Nitrogen Co. Ltd.'s Tringen I and II (a joint venture between the Government and Yara International ASA); and by Yara Trinidad Ltd. (owned by Yara International ASA). These companies had a combined ammonia production capacity of about 5.4 Mt/yr (table 2; Central Bank of Trinidad and Tobago, 2015a, p. 20).

## Mineral Trade

In 2014, the total value of Trinidad and Tobago's exports was about \$11.8 billion compared with \$12.8 billion in 2013. The decrease in exports was attributed to a decrease in the production of the energy sector owing to extensive maintenance work and upgrade activities, mainly by Atlantic LNG, BGTT, and BPTT, and decreased production by Petrotrin. The total value of the country's imports was about \$8.4 billion compared with \$8.8 billion in 2013. Exports of crude oil totaled about 11.9 Mbbbl compared with 12.5 Mbbbl in 2013; methanol, 5.5 Mt compared with 5.7 Mt; natural gas liquids, 10.8 Mbbbl compared with 12.7 Mbbbl; and petroleum products, 29.0 Mbbbl compared with 37.2 Mbbbl. The country also exported about 1.1 Mt of direct-reduced iron, 151,000 t of billets, and 170,000 t of cement (Central Bank of Trinidad and Tobago, 2015a, p. 49, 66–67).

Trinidad and Tobago's exports to the United States were valued at about \$6.0 billion in 2014 compared with about \$6.5 billion in 2013. Fuel oil accounted for about \$1.1 billion of these exports; natural gas, about \$834 million; and iron and steel mill products, about \$661 million. Imports from the United States were valued at about \$2.4 billion in 2014, which

was about the same amount as in 2013; these included about \$135 million in drilling and oilfield equipment and \$85 million in petroleum products (U.S. Census Bureau, 2015a, b).

## Commodity Review

### Mineral Fuels

**Petroleum.**—In 2014, the 0.1% increase in crude oil production was attributed to small independent crude oil producers, which accounted for about 12% (about 10,000 bbl/d) of the country's total crude oil production. In July, Repsol S.A. of Spain announced the discovery of hydrocarbons at its Teak Samman Poui offshore block, which is located east of Trinidad. Repsol held 70% interest in a joint venture with Petrotrin and NGC (15% each). The discovery was made in Teak North (TB14) and was estimated to contain more than 40 Mbbbl of oil. In July, London-based Trinity Exploration and Production plc signed an agreement with Centrica plc of the United Kingdom to acquire 80% interest in two exploration offshore blocks (1a and 1b), which are located along the west coast of Trinidad, at a cost of about \$23 million. The assets included four gas discoveries—*Iguana*, *Zandolie East*, and *Zandolie West* in Block 1a and *Anole* on Block 1b (Repsol S.A., 2014; Central Bank of Trinidad and Tobago, 2015a, p. 19–20).

In 2013, the Government, through the MEEA, opened its 2013 deep water competitive bid round for six offshore blocks in the Trinidad and Tobago Deep Atlantic Area (TTDA). In March, three bids were received for two of the six blocks. In July, the MEEA awarded the TTDA 3 and TTDA 7 Blocks to the consortium of BG International Ltd. (BG) of the United Kingdom and BHP Billiton Ltd. of Australia, through its subsidiary BHP Billiton Petroleum (International Exploration) Pty Ltd. The Government and the consortium signed the two production-sharing contracts for the two blocks at yearend 2014. BHP Billiton was the operator and held 65% interest in the two blocks, which are located along the southeastern coast of Trinidad and Tobago. BG held the remaining 35% interest. The production-sharing contracts included an exploration phase for a period of 9 years. The first phase of the exploration included the acquisition of 2,400 km<sup>2</sup> of three-dimensional seismic data and additional geologic studies, at a cost of about \$29 million (Ministry of Energy and Energy Affairs, 2014a–c; Central Bank of Trinidad and Tobago, 2015a, p. 19–20).

### Outlook

The rate of growth for Trinidad and Tobago's GDP was forecast to be 1.2% for 2015 (International Monetary Fund, 2015, p. 178). The energy sector was expected to remain important to the long-term economic growth of the country. An increase in crude oil production by small independent producers is likely to stabilize the general decline in crude oil output in the country (Central Bank of Trinidad and Tobago, 2015a, p. 7).

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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 not available.

TABLE 1  
ISLANDS OF THE CARIBBEAN: PRODUCTION OF MINERAL COMMODITIES<sup>1,2</sup>

(Metric tons unless otherwise specified)

Country and commodity	2010	2011	2012	2013	2014
<b>DOMINICAN REPUBLIC<sup>3,4</sup></b>					
<b>Metals:</b>					
Bauxite	8,888	--	10,522	769,530	1,446,311
Copper, mine output, Cu content	10,015	11,777	11,737	10,379	9,262
Gold, mine output, Au content kilograms	533	495	4,106	26,084 <sup>r</sup>	35,081
<b>Nickel, Ni content:</b>					
Mine output, laterite ore	--	1,143,000	1,301,694	1,100,000	--
Metal, Ni contained in ferronickel, smelter	--	13,528 <sup>r</sup>	15,186	9,400 <sup>s</sup>	--
Silver, mine output, Ag content kilograms	22,815	18,169	27,296	78,228 <sup>r</sup>	127,712
<b>Industrial minerals:</b>					
Cement, hydraulic	4,105,657	3,996,500	4,130,000	4,245,720 <sup>r</sup>	4,800,000 <sup>e</sup>
Clay cubic meters	51,250	17,050	154,693	251,055 <sup>r</sup>	121,737
Gypsum do.	53,800	31,177	116,181	90,111 <sup>r</sup>	151,936
<b>Sand:</b>					
Calcareous do.	163,000	27,500	32,700	-- <sup>r</sup>	--
Silica do.	19,652	20,518	25,581	10,256 <sup>r</sup>	--
<b>Stone:</b>					
Dolomite do.	3,500	3,000	3,000	4,000	3,000
Limestone do.	2,123,317	2,619,099	5,096,936	3,609,927 <sup>r</sup>	1,844,572
Marble do.	5,336	6,137	6,014	2,444	3,156
Pozzolan do.	101,311	91,933	76,366	35,579 <sup>r</sup>	--
Travertine do.	324	1,001	2,161	3,039	2,257
<b>JAMAICA<sup>6,7</sup></b>					
<b>Metals:</b>					
<b>Bauxite and alumina:</b>					
Bauxite, dry equivalent, gross weight thousand metric tons	8,540	10,190	9,290	9,510	9,725
Alumina do.	1,591	1,960	1,758	1,855	1,851

See footnotes at end of table.



TABLE 1—Continued  
ISLANDS OF THE CARIBBEAN: PRODUCTION OF MINERAL COMMODITIES<sup>1,2</sup>

(Metric tons unless otherwise specified)

Country and commodity	2010	2011	2012	2013	2014	
<b>Industrial minerals:</b>						
Cement, hydraulic	723,489	766,274	760,300	824,893	830,061	
Gypsum	147,103	79,521	64,753	48,322	45,201	
Lime	73,980	79,250	84,264	106,281	104,140	
Sand and gravel	thousand metric tons	2,750	2,475	2,599	1,902	2,118
Silica sand		12,964	13,965	13,945	15,824	15,833
<b>Stone:</b>						
Limestone	thousand metric tons	1,956	2,451	2,233	1,949	2,138
Pozzolan	do.	140	130	107	112	129
<b>Mineral fuels and related materials:</b>						
Petroleum, refinery products	thousand 42-gallon barrels	8,132 <sup>r</sup>	8,590 <sup>r</sup>	8,510 <sup>r</sup>	8,060 <sup>r</sup>	6,590
TRINIDAD AND TOBAGO <sup>8,9</sup>						
<b>Metals:</b>						
<b>Iron and steel:</b>						
Direct-reduced iron		1,751,800	1,705,600	1,684,300	1,749,700	1,633,000
Steel, crude <sup>10</sup>		572,000	603,500	624,000	615,800	483,300
<b>Industrial minerals:</b>						
Cement, hydraulic		790,900	827,000	654,100	801,600	836,500
Fertilizers	thousand metric tons	6,262	5,715	5,453	5,129	5,172
Nitrogen, N content of anhydrous ammonia		5,553,242	5,444,300	4,466,000	4,640,000	4,730,447
Sulfur	thousand 42-gallon barrels	46	37	6	33	18
<b>Mineral fuels and related materials:</b>						
Methanol	thousand metric tons	5,932	5,904	5,491	5,633	5,481
Natural gas, gross	million cubic meters	44,750 <sup>r</sup>	42,883	42,705 <sup>r</sup>	42,244	41,400
Natural gas liquids	thousand 42-gallon barrels	17,223	16,043	12,890	12,573	11,992
<b>Petroleum:</b>						
Crude	do.	35,837	33,550	29,915	29,617	29,659
Refinery products	do.	46,167	50,098	39,060	48,177	38,212
Urea		708,760	616,247	521,000	490,000	441,817

<sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. <sup>r</sup>Revised. do. Ditto. -- Zero.

<sup>1</sup>Table includes data available through July 13, 2015.

<sup>2</sup>The countries of Aruba, The Bahamas, Barbados, Dominica, Haiti, Martinique, and St. Kitts and Nevis are known to produce mineral commodities, including aragonite, cement, lime, limestone, petroleum refinery products, pumice, salt, sand and gravel, stone, and sulfur, but production data have not been available for a number of years and production volumes have been so small relative to global totals that reliable production estimates could no longer be made.

<sup>3</sup>In addition to the commodities listed, the Dominican Republic also produced petroleum refinery products, but production data have not been available for a number of years, and production volumes have been so small relative to global totals that reliable production estimates could no longer be made.

<sup>4</sup>Sources: Oficina Nacional de Estadística—Dominicana en Cifras 2014, and Volumen de Producción de Productos Mineros por Producto, Según Año 2003–2014 [National Bureau of Statistics—Dominican Republic in Figures 2014; and Volume of Production of Mining Products By Product, for the Years 2003 to 2014].

<sup>5</sup>Source: Glencore Xstrata plc.

<sup>6</sup>In addition to the commodities listed, Jamaica also produced clay, marble, marl, and shale, but production data have not been available for a number of years, and production volumes have been so small relative to global totals that reliable production estimates could no longer be made.

<sup>7</sup>Sources: Ministry of Science, Technology, Energy and Mining, Mines and Geology Division; and Bank of Jamaica—Production of Selected Commodities.

<sup>8</sup>In addition to the commodities listed, Trinidad and Tobago also produced clay, limestone, and sand and gravel, but available information was inadequate to make reliable estimates of output.

<sup>9</sup>Sources: Central Bank of Trinidad—2014 Annual Economic Survey; and Ministry of Energy and Energy Affairs—Tobago and the Consolidated Monthly Bulletins 2010–2014.

<sup>10</sup>Based on billet production.

TABLE 2  
ISLANDS OF THE CARIBBEAN: STRUCTURE OF THE MINERAL INDUSTRIES IN 2014

(Metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity <sup>c</sup>
<b>ARUBA</b>				
Petroleum, refinery	42-gallon barrels per day	Valero Aruba Refinery (Valero Energy Corp., 100%)	Southern Aruba	235,000 <sup>1</sup>
<b>BAHAMAS, THE</b>				
Petroleum, refinery	thousand 42-gallon barrels	Bahamas Oil Refining Company International Ltd. (Buckeye Partners L.P., 80%)	Storage facilities, Freeport	21,600 <sup>1</sup>
<b>BARBADOS</b>				
Cement		Arawak Cement Company Ltd. (Trinidad Cement Ltd, 100%)	Checker Hall, Saint Lucy	360,000
<b>DOMINICAN REPUBLIC</b>				
Bauxite		Dovemco S.A.	Mercedes, Pedernales	NA
Copper		Corporación Minera Dominicana (Perilya Ltd., 100%)	Maimon, Monseñor Nouel	15,000
Gold	kilograms	do.	do.	600
Do.	do.	Pueblo Viejo Dominicana Corp. (Barrick Gold Corp., 60%, and Goldcorp Inc., 40%)	Pueblo Viejo	35,000
Do.	do.	Las Lagunas Project (PanTerra Gold. Ltd., 100%)	Las Lagunas	1,600 <sup>2</sup>
Nickel		Falconbridge Dominicana S.A (Glencore plc, 85.3%; Government, 10%; Franco-Nevada Corp., 4.1%; private interests, 0.6%)	Loma Las Peguera, Bonao	29,000 <sup>3</sup>
Petroleum, refinery	42-gallon barrels per day	Refinería Dominicana de Petróleo S.A. (Government, 51%, and Petróleos Venezuela S.A., 49%)	Haina Port	34,000
Silver	kilograms	Corporación Minera Dominicana (Perilya Ltd., 100%)	Maimon, Monseñor Nouel	15,000
Do.	do.	Las Lagunas Project (PanTerra Gold. Ltd., 100%)	Las Lagunas	14,000 <sup>2</sup>
Do.	do.	Pueblo Viejo Dominicana Corp. (Barrick Gold Corp., 60%, and Goldcorp Inc., 40%)	Pueblo Viejo	110,000
<b>HAITI</b>				
Cement		Cimenterie Nationale S.E.M. (Cementos Argos S.A.)	Cabaret	850,000
<b>JAMAICA</b>				
Alumina		Alumina Partners of Jamaica (Alpart) (United Company RUSAL Plc, 100%)	Nain, St. Elizabeth	1,650,000 <sup>4</sup>
Do.		Jamaica Aluminum Co. (Jamalco) (Noble Group Ltd., 55%, and Government, 45%)	Refinery at Halse Hall, Clarendon	1,400,000
Do.		West Indies Alumina Co. (Winalco) (United Company RUSAL Plc, 100%)	Ewarton Works refinery, St. Catherine and Kirkvine Works refinery, Manchester	1,210,000 <sup>5</sup>
Bauxite		Alumina Partners of Jamaica (Alpart) (United Company RUSAL Plc, 100%)	Nain, St. Elizabeth	4,900,000 <sup>4</sup>
Do.		Jamaica Aluminum Co. (Jamalco) (Noble Group Ltd., 55%, and Government, 45%)	Manchester	1,800,000
Do.		Noranda Bauxite Ltd. (Noranda Aluminum Holding Corp., 49%, and Government., 51%)	St. Ann	4,500,000
Do.		West Indies Alumina Co. (Winalco) (United Company RUSAL Plc, 100%)	Russell Place and Schwallenburgh	4,000,000
Cement		Caribbean Cement Co. Ltd. (Trinidad Cement Ltd.)	Rockfort, Kingston	2,200,000
Petroleum, refinery	42-gallon barrels per day	Petrojam Ltd. (Government, 51%, and Petróleos de Venezuela S.A., 49%)	Kingston Port	30,000
<b>TRINIDAD AND TOBAGO</b>				
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. (ArcelorMittal, 100%), of which:	Point Lisas Industrial Estate	4,100,000
		Direct-reduced iron pellets	do.	(2,700,000)
		Billets	do.	(700,000)
		Wire rods	do.	(700,000)

See footnotes at end of table.

TABLE 2—Continued  
ISLANDS OF THE CARIBBEAN: STRUCTURE OF THE MINERAL INDUSTRIES IN 2014

(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				
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.		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
Do.		RRJ Ltd.	Tabaquite Road, Guaracara	NA
Liquefied natural gas		Train 1 [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%]	Point Fortin	3,000,000
Do.		Trains 2 and 3 [BP Train 2/3 Holding SRL, 42.5%; BG 2/3 Investment Ltd., 32.5%; Shell LNG Port Spain BV, 25%]	do.	6,600,000
Do.		Trains 4 [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%]	do.	5,200,000
Methanol		Atlas plant (Methanex Corp., 63.1%)	Point Lisas Industrial Estate	1,700,000
Do.		Titan plant (Methanex Corp., 100%)	do.	850
Do.		Methanol Holdings (Trinidad) Ltd., of which:	do.	4,800,000
		Plant 1		(480,000)
		Plant 2		(550,000)
		Plant 3		(570,000)
		Plant 4		(580,000)
		Plant 5		(1,900,000)
Natural gas liquids	42-gallon barrels per day	Phoenix Park Gas Processors Ltd. (National Gas Company of Trinidad and Tobago, 51%)	Port of Savonetta	70,000
Nitrogen (ammonia)		Ammonia Urea Nitrate Melamine (AUM) complex (Methanol Holdings (Trinidad) Ltd., 100%)	Point Lisas Industrial Estate	650,000
Do.		Caribbean Nitrogen Company (a consortium of EOG Resources Trinidad Ltd., KOCH Industries, Man Ferrostaal, and Proman Group)	do.	650,000
Do.		Nitrogen (2000 plant) Unlimited (a consortium of EOG Resources Trinidad Ltd., KOCH Industries, Man Ferrostaal, and Proman Group)	do.	650,000
Do.		PCS Nitrogen (Trinidad) Ltd. (Potash Corp., 100%)	do.	2,200,000
Do.		Point Lisas Nitrogen Ltd. (CF Industries Holdings Inc, 50%, and KOCH Fertilizer LLC, 50%)	do.	650,000
Do.		Trinidad Nitrogen Co. Ltd. (Tringen I and II) (Government, 51%, and Yara International ASA, 49%)	do.	1,000,000
Do.		Yara Trinidad Ltd. (Yara International ASA, 100%)	do.	300,000
Sand and gravel		29 quarries	Matura, Sangre Grande, Turure, and Valencia	NA
Petroleum:				
Refinery	42-gallon barrels per day	Petroleum Company of Trinidad and Tobago Ltd. (Government, 100%)	Pointe-a-Pierre	168,000
Crude	do.	Greater Angostura (BHP Billiton Ltd., 45%; Total S.A., 30%; Chaoyang, 25%)	Greater Angostura oilfield	100,000

See footnotes at end of table.

TABLE 2—Continued  
 ISLANDS OF THE CARIBBEAN: STRUCTURE OF THE MINERAL INDUSTRIES IN 2014

(Metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity <sup>6</sup>
TRINIDAD AND TOBAGO—				
Continued				
Urea	metric tons	PCS Nitrogen Trinidad Ltd. (Potash Corp. of Saskatchewan, Inc., 100%)	Point Lisas Industrial Estate	748,000
Do.	do.	Ammonia Urea Nitrate Melamine (AUM) complex (Methanol Holdings Ltd., 100%)	do.	NA

<sup>6</sup>Estimated. Do., do. Ditto. NA Not available.

<sup>1</sup>Storage facilities.

<sup>2</sup>Las Lagunas project involves the reprocessing of gold and silver refractory tailings from previous operations at the Pueblo Viejo Mine.

<sup>3</sup>Placed on care-and-maintenance status.

<sup>4</sup>Operations suspended.

<sup>5</sup>Operations at Kirkvine Works have been suspended since 2009.