



2015 Minerals Yearbook

GUYANA [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF GUYANA

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A significant offshore crude petroleum discovery by Exxon Mobil Corp. of the United States in May 2015 could provide a boost to the economy of Guyana during the next several years and stimulate mineral fuel exploration and investment. With an economy measured at about \$3 billion, this crude petroleum discovery and potential development could add billions of dollars to the economy during the next decade. In 2015, there was no production of mineral fuels in Guyana, but there was some production of metals and industrial minerals, including bauxite, diamond, gold, loam, and crushed stone. According to the Guyana Geology and Mines Commission (GGMC), the country has occurrences of other minerals, such as chromite, copper, iron ore, mica, peat, phosphate, platinum-group metals, quartz, rare earths, tin, and others (table 1; Guyana Geology and Mines Commission, 2014a–c; WorldOil.com, 2015; Bank of Guyana, 2016, p. 11).

Minerals in the National Economy

Guyana's real gross domestic product (GDP) increased by 3.0% in 2015 compared with a 3.8% rate of growth in 2014. The expansion of the economy in 2015 was owing to favorable performances in the service, agriculture, and manufacturing sectors, which contributed 65.9%, 22.6%, and 4.0%, respectively, to the country's GDP. The output of the mining and quarrying sector contributed 10.9% to the GDP in 2015 compared with 10.3% in 2014. Guyana's mining and quarrying sector expanded by 9.0% in 2015 owing to an increase in the production of gold (table 1; Bank of Guyana, 2016, p. 10–11).

Government Policies and Programs

In Guyana, all mineral rights are owned by the state. GGMC is the Government agency that is responsible for overseeing the activities of the mining industry. It is composed of five technical divisions: environment, geologic services, land management, mines, and petroleum. The functions of the GGMC are to enforce the provisions of mining licenses, permits, and concessions, as well as those of prospecting and quarrying licenses; to collect rental fees and other charges that are payable under the law; and to act as a national repository for all information relating to geology and mineral resources. The Mines Division regulates the mining sector in accordance with the Mining Act of 1989. The Petroleum Division regulates all activities in the crude petroleum industry; provides economic, environmental, and technical advice; and supports competitiveness and efficiency in the petroleum sector (Guyana Geology and Mines Commission, 2015).

Production

The country produced 14,024 kilograms (kg) of gold in 2015, which was a 16.4% increase compared with that of 2014. Diamond production increased to 118,451 carats in 2015, or by

18.5% compared with that of 2014. The increases in gold and diamond production were attributed to a boost in the output of medium- and large-scale mines. Preliminary data for bauxite indicate that production decreased by about 6.4% compared with that of 2014 to about 1.5 million metric tons (Mt). Crushed stone production decreased by 56% owing to a decrease in construction activity (table 1; Bank of Guyana, 2016, p. 10–12).

Structure of the Mineral Industry

Table 2 is a list of the major mineral industry facilities in Guyana.

Mineral Trade

The value of Guyana's exports was unchanged from that of 2014 at \$1.17 billion. The leading mineral commodity exports in 2015 were, in order of value, gold (increased to \$501.1 million from \$469.8 million in 2014); bauxite (decreased to \$104.3 million from \$124.7 million in 2014); and diamond (increased to \$16.7 million from \$14.7 million in 2014). The increase in the value of gold exports was attributed to a 16% increase in output, which offset an 8% decrease in export prices. The decrease in the value of bauxite shipments was attributed to a 37.6% decrease in the tonnage of calcined bauxite exports and a 10.4% decrease in the tonnage of metal-grade bauxite exports. In 2015, the exports to the United States of nonmonetary gold and bauxite and aluminum were valued at about \$309 million and \$26 million, respectively (Bank of Guyana, 2016, p. 11, 16–18; U.S. Census Bureau, 2016).

Imports were valued at about \$1.47 billion in 2015 compared with about \$1.79 billion in 2014; the decrease was owing to a lesser amount of capital goods, consumption goods, and intermediate goods imported. Imports of fuel and lubricants were valued at about \$351 million compared with a revised \$573 million in 2014. The value of mining equipment imports decreased by 42% to \$30.7 million in 2015 from \$52.7 million in 2014; the decrease was likely owing to less equipment being required for the implementation of some major bauxite, gold, and crude petroleum projects in 2015, especially after having increased sharply in 2014 (Bank of Guyana, 2016, p. 17–18).

Commodity Review

Metals

Bauxite and Alumina.—The Bauxite Company of Guyana Inc. (BCGI) was a leading bauxite producer in Guyana. United Company RUSAL Plc of Russia owned a 90% stake in BCGI, and the remaining 10% was owned by the Government. As of December 31, BCGI's total bauxite mineral resources were estimated to be about 86.3 Mt, of which measured resources totaled 2.1 Mt; indicated resources, 40.0 Mt; and inferred resources, 44.2 Mt. In 2015, the company had the capacity

to produce 1.7 million metric tons per year of bauxite and a capacity utilization rate of 69%. The company's production decreased by 5% to about 1.18 Mt from about 1.24 Mt in 2014 (United Company RUSAL Plc, 2016, p. 24–25, 47).

In 2015, BCGI commenced mining operations at the Kurubuka-22 bauxite deposit, which is located in Aroaima in the Upper Demerara-Berbice Region. After having invested more than \$25 million since 2013, it was expected that the Kurubuka-22 bauxite mine would add 1.7 Mt of high-quality bauxite capacity in 2015. The mine's mineral reserves were reported to be 30 Mt and the mine had an estimated life of 15 to 20 years. BCGI also owned licenses to develop the Linden, the Kwakwani, and the Ituni bauxite deposits in Guyana (United Company RUSAL Plc, 2015a, p. 16; 2015b; 2016, p. 17).

Gold.—Guyana Goldfields Inc., a junior mining company based in Canada, began production at its Aurora gold mine, located in the Cuyuni-Mazaruni Region, near the end of 2015, producing about 1,120 kg of gold. The mine was expected to produce up to 6,300 kilograms per year (kg/yr) of gold from 2017 to 2028 (Guyana Goldfields Inc., 2016, p. 4, 14).

Troy Resources Ltd. (TSX), a junior mining company based in Australia, announced in late October that it would soon begin gold extraction at its Karouni gold mine, which is located in the Pomeroy-Supenaam Region. The mine was expected to produce up to 3,100 kg/yr of gold during its initial 3 years. TSX noted that it had spent about \$100 million on bringing the project into operation (Jamasmie, 2015).

Mineral Fuels

Petroleum and Natural Gas.—In May, ExxonMobil announced that its subsidiary in Guyana, Esso Exploration and Production Guyana Ltd., had discovered a high-quality crude petroleum-bearing sandstone reserve at the Liza location in the offshore Stabroek Block, which comprised 26,806 square kilometers (km²). The recoverable reserves were still being assessed, as preliminary estimates ranged from a low of 200 million barrels (Mbbbl) to a high of 700 Mbbbl. The Government announced that production was expected to begin by 2020 (Exxon Mobil Corp., 2015; 2016, p. 32; WorldOil.com, 2015).

Two other companies that were involved in advanced crude petroleum exploration in 2015 were Canada-based CGX Energy Inc. (CGX) and Tullow Oil plc (Tullow) of the United Kingdom. CGX was focused on exploration for crude petroleum in the area covered by its 100%-owned Corentyne and Demerara concessions and 62%-owned Berbice concession. Corentyne comprised 11,300 km², of which 10,100 km² is located offshore and 1,200 km² is located onshore. The prospective resources on Corentyne were estimated to be 779 Mbbbl of crude petroleum, 743 Mbbbl of condensate, about 197 billion cubic meters (6,943 billion cubic feet) of natural gas, plus about 20 billion cubic meters (696 billion cubic feet) of solution gas. The Berbice concession comprised 3,295 km² onshore Guyana, and the Demerara (formerly Annex) concession comprised approximately 3,975 km² offshore Guyana. Both Berbice and Demerara were in the prospecting and advanced exploration stages of development during the year. Tullow continued to focus on the Kanuku Block in the Cuyuni-Mazaruni Region, which comprised 6,525 km². Tullow held a 30%

interest of the license; the remainder was held by the operator, Repsol Exploration S.A. of Spain (CGX Energy Inc., 2015a–c; Tullow Oil plc, 2015, p. 57, 167).

Outlook

Guyana's economic growth in the short term is likely to be positive. According to the Bank of Guyana, the economy is projected to grow by 4.4% in 2016, and the value added of the mining and quarrying sector is expected to increase by 16.6%. Bauxite, diamond, and gold are likely to continue to be the dominant mineral commodities in Guyana's mineral industry. The Kurubuka-22 bauxite mine is expected to increase production as it ramps up during the next year few years. The startup of the Aurora and the Karouni Mines are likely to increase overall gold production. Offshore hydrocarbon exploration in Guyana could increase following the significant discovery by ExxonMobil. It is expected that Guyana will become a crude petroleum-producing country in the near future and attract foreign investment in the mineral fuel sector in the longer term (Bank of Guyana, 2016, p. 15).

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TABLE 1
 GUYANA: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity		2011	2012	2013	2014	2015
METALS						
Bauxite, dry equivalent, gross weight		1,828	2,210	1,649	1,602	1,500 ^P
Gold, mine output, Au content	kilograms	11,293	13,643	14,964	12,052	14,024
INDUSTRIAL MINERALS						
Diamond, gem, unspecified	carats	52,273	40,764	63,961 ^r	99,950	118,451
Stone, sand, and gravel:						
Sand and gravel, construction, common sand	metric tons	674,880	1,478,184	2,334,000	4,169,387	1,900,000 ^P
Stone, crushed, unspecified	do.	534,058	483,858	659,969 ^r	840,074 ^r	373,162
Stone, size and shape unspecified, loam	do.	12,133	92,064	94,559	100,800	105,000 ^e

^eEstimated. ^PPreliminary. ^rRevised. do. Ditto.

¹Table includes data available through June 28, 2016.

Source: Guyana Geology and Mines Commission, Bank of Guyana.

TABLE 2
 GUYANA: STRUCTURE OF THE MINERAL INDUSTRY IN 2015

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Bauxite	Alcoa Inc.	Berbice Mine, Upper Demerara-Berbice Region	NA
Do.	Bauxite Company of Guyana Inc. (BCGI) (United Company RUSAL Plc, 90%, and Government, 10%)	Kurubuka Mine, Upper Demerara-Berbice Region	1,700
Do.	Bosai Minerals Group Guyana Inc. (Bosai Minerals Group Company Ltd., 70%, and Government, 30%)	Omai bauxite mine and processing plant located near Linden on the Demerara River about 100 kilometers south of Georgetown	600
Gold and precious stones	Numerous domestic artisanal operations	Various locations	NA
Do.	Ensurge Inc.	Cuyuni-Mazaruni Region	NA
Do.	kilograms Guyana Goldfields Inc.	Aurora Mine, Cuyuni-Mazaruni Region	6,300
Do.	Hunter May Minerals Plc.	Mazaruni and Puruni tailings, Cuyuni-Mazaruni Region	NA
Do.	Mahdia Gold Corp.	Omai Mine, central Guyana	NA
Do.	kilograms Troy Resources Ltd.	Karouni Mine, Pomeroun-Supenaam Region	5
Sand and gravel	Baracara Quarries (Rahaman Group)	Quarry near Bartica, Mazaruni-Potaro District	100
Silica sand	Minerals and Technology Ltd. [Minerals and Chemicals of Texas (United States)]	Sand Hills, Demerara River, West Demerara District	300
Stone	BK Quarries Inc. (BK International Inc.)	Mazaruni River	3,650

Do. Ditto. NA Not available.