

2014 Minerals Yearbook

FRENCH GUIANA

THE MINERAL INDUSTRY OF FRENCH GUIANA

By Sean Xun

French Guiana is an overseas Department of France. It is located in the northeastern part of South America. French Guiana's mineral resources include bauxite, clays, copper, diamond, gold, lead, nickel, petroleum, platinum, sand, stone, uranium, and zinc. In 2014, French Guiana produced clays, gold, laterite, sand, and stone and conducted offshore petroleum exploration activities (table 1; Institut d'Émission des Départements d'Outre-Mer, 2015a, p. 88, 92; 2015b).

Minerals in the National Economy

The real gross domestic product (GDP) rate of growth was 2.9% in 2013 (the latest year for which data were available) compared with 3.3% in 2012. The nominal GDP in 2013 was \$5.2 billion.¹ The GDP per capita in French Guiana, which was about one-half of France's per capita GDP, increased by 2.6% in 2013. The space industry was a leading component of French Guiana's economy. The number of launches increased by 57% to 11 in 2014 compared the number in with 2013. Gold mining was an important component of the economy, as gold exports accounted for 28% of total exports in 2014 and 55% of total exports in 2004. The volume of gold exports had been stagnant for several years owing to low gold prices. Gold mining was also affected by issues related to illegal artisanal gold mining, regulatory constraints, and higher production costs in recent years. In 2014, activity in the construction industry slowed as construction of public housing and other new projects declined, and cement sales decreased by 6.4% following a 9.9% decrease in 2013 (Institut d'Émission des Départements d'Outre-Mer, 2014, 2015b).

Government Policies and Programs

The exploration and exploitation of minerals in French Guiana is regulated by the Mining Code that was adopted under Act No. 98–297 of 1998. According to the Mining Code, four types of licenses and permits can be granted for exploration and exploitation activities. Exploration permits allow for up to 5 years to characterize a deposit, and these permits may be renewed twice. An operating authorization is designed to meet the specific needs of artisanal mining, is applicable to deposits with a maximum area of 1 square kilometer for a period of 4 years, and may be renewed only once. An operating permit has an operating life of 5 years and may be renewed twice without competition for up to 5 years each time. Concessions allow the longest operating life—up to 50 years with an extension of 25 years. Licenses and permits are granted on a competitive basis unless they are the continuation of a research permit or an operating permit (Institut d'Émission des Départements d'Outre-Mer, 2015a, p. 87).

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an average rate of EUR0.75=US\$1.00 for 2013 and 2014.

The Schéma Départemental d'Orientation Minière [Framework on Mining] (SDOM) was approved in 2011 and entered into force on January 1, 2012. The objectives of the SDOM were to promote mining activity, to create a mining technical hub in French Guiana, and to fully integrate the environmental effects of mining activities. According to the framework, mining is prohibited on 45% of the territory (versus 29% before the SDOM). Of the remaining territory, 20% is subject to specific constraints, and 35% is subject to common laws (Institut d'Émission des Départements d'Outre-Mer, 2015a, p. 87).

Between 4,000 and 10,000 illegal immigrants were estimated to be employed in illegal artisanal gold mining, mainly in the area of the Amazon Park. The Government has conducted several operations since 2004 to reduce illegal artisanal gold mining activities. The number of clandestine sites decreased from 479 to 379 from January to December 2014. On November 13, an agreement between France and Brazil, which sought to promote cross-border cooperation in the fight against illegal artisanal gold mining, entered into force. The measures in the agreement included the strengthening of judicial cooperation and better monitoring of gold mining and trading activities on both sides of the Oyapock River. The agreement was adopted by the French National Assembly in April 2011 and approved by the Government of Brazil in December 2013 (Institut d'Émission des Départements d'Outre-Mer, 2015a, p. 90).

Production

In 2014, gold production was estimated to be at the same level as that of 2013. The stagnated production level during the past 5 years was owing mainly to the low price of gold and the regulatory constraints on illegal mining. Cement production, which was estimated based on sales, decreased by 6.4% owing to decreased construction activity in the country (table 1).

Structure of the Mineral Industry

Gold mining, cement production, and petroleum exploration in French Guiana were conducted mainly by international companies. The international companies focused mainly on primary gold mining, whereas the smaller operators were limited to the exploitation of alluvial gold, which required less engineering and investment. Table 2 is a list of major mineral facilities operating in French Guiana in 2014 (Institut d'Émission des Départements d'Outre-Mer, 2015a, p. 88).

Mineral Trade

In 2014, the total value of exported goods was \$235 million compared with \$390 million in 2013. The decrease was owing mainly to decreased exports of capital goods, which decreased to \$118 million in 2014 from \$247 million in 2013. The value of exported metal and metallurgical products (including gold)

amounted to \$66 million in 2014 compared with \$90 million in 2013. Reexports of space-related goods (in the “capital goods” category) and gold production accounted for most of the value of exports. The total value of imported goods was \$1,927 million compared with \$2,119 million in 2013. The value of imported oil products and hydrocarbons amounted to \$292 million in 2014 compared with \$319 million in 2013. Mainland France was the country’s leading trade partner, followed by Europe (excluding France). Trade with partners in South America and Asia was comparably insignificant (Institut d’Émission des Départements d’Outre-Mer, 2014, 2015b).

Commodity Review

Metals

Gold.—A mineral survey, which covered more than one-half of French Guiana’s territory, was conducted between 1975 and 1995 by the Bureau of Geological Research and Survey. Some potential gold deposit areas were identified by the survey, including an area located close to the Maroni, an area located between the Approuague and Oyapock Rivers, an area in the center of Saul, and Camp Caiman (Institut d’Émission des Départements d’Outre-Mer, 2015a, p. 87–88).

In 2014, investments in the gold mining sector decreased to \$17 million, or by 21%, from those of 2013. At yearend 2013, the gold mining sector employed approximately 550 registered workers. The leading gold mining company was Auplata S.A. of France. The main mining sites included Yaou and Dorlin, which are located in Maripasoula; the Dieu Merci Mine, which is located in Saint-Élie; and the Paul Isnard project, which is located between Apatou and St. Lawrence’s Maroni and was under development by Columbus Gold Corp. of Canada (100% interest) (Columbus Gold Corp., 2015; Institut d’Émission des Départements d’Outre-Mer, 2015a, p. 88).

At the Paul Isnard project, Columbus Gold was developing the Montagne d’Or deposit, which was estimated to have indicated resources of 83.2 million metric tons (Mt) at a grade of 1.45 grams per metric ton (g/t) gold containing 121 metric tons (t) of gold, and inferred resources of 22.4 Mt at a grade of 1.55 g/t gold containing 35 t of gold. The cutoff grade was 0.4 g/t gold. The life of the mine was expected to be 13 years with annual production of 8,490 kilograms of gold. The project was funded by Nordgold of Russia, which could earn a 50.01% interest in the project by investing a minimum of \$30 million and completing a bankable feasibility study by March 2017. As of yearend 2014, \$16.2 million was paid to Columbus Gold for the bankable feasibility study (Columbus Gold Corp., 2015; Nordgold, 2015a, p. 251; 2015b, p. 97–98).

On February 25, Auplata S.A. announced that it had received the required authorizations to construct and operate a centralized cyanide plant to treat gold concentrates from its various mines and mining sites in French Guiana. Auplata S.A. was expected to build cyanide plants at its mine sites after receiving the authorization (Columbus Gold Corp., 2014).

Industrial Minerals

Cement.—French Guiana’s cement consumption per capita was 433 kilograms per year. On April 9, Colombia’s Cementos Argos S.A. signed an agreement to acquire 100% of the cement company Ciments Guyanais in French Guiana, which was owned jointly by Lafarge S.A. of France and Holcim Ltd. of Switzerland (50% each). The cost of the acquisition was \$67 million. The assets of the purchase included a 200,000-metric-ton-per-year clinker-grinding station and a port, both of which were located at Dégrad des Cannes close to the capital, Cayenne. The capacity utilization rate at the Ciments Guyanais cement plant was about 40% to 50% in recent years (Cementos Argos S.A., 2014a, b; Global Cement News, 2014).

Mineral Fuels

Natural Gas and Petroleum.—Petroleum exploration activities had been conducted in French Guiana’s seabed for several years. Exploration was motivated by the presence of large offshore deposits in Ghana, which had a seabed similar to that of French Guiana’s. The Hardman Resources Group of Australia was granted a license to explore for oil deposits in the Guyanese maritime area in 2001. The Hardman Resources Group was acquired in 2007 by Tullow Oil plc of the United Kingdom, and in the same year, the exploration license was renewed by the Government (Institut d’Émission des Départements d’Outre-Mer, 2015a, p. 91).

In 2011, a consortium led by Royal Dutch Shell plc of the Netherlands was formed to conduct petroleum exploration in French Guiana. The consortium was composed of Royal Dutch Shell (45%), Tullow Oil (27.5%), Total S.A. of France (25%), and Northern Petroleum plc of the United Kingdom (2.5%). The Zaedyus discovery well, GM-ES-1, was drilled in 2011, and oil was encountered. As the first deepwater well to be drilled offshore French Guiana, it opened up a new petroleum province offshore South America, confirming the validity of the West African field analogue models that were used ahead of drilling. Following the GM-ES-1 discovery, a four-well drilling campaign was conducted from July 2012 to yearend 2013. Oil was not encountered in these drillings (Institut d’Émission des Départements d’Outre-Mer, 2015a, p. 92; Total S.A., 2015, p. 100; Northern Petroleum plc, 2016).

In 2014, the samples and seismic data collected from various drilling campaigns were being evaluated by the consortium. Decisions about future exploration or appraisal well drilling would be made based on the outcome of these analyses. The consortium was expected to apply for an extension of the license that was set to expire in mid-2016. Owing to the uncertainty concerning future exploration, Northern Petroleum decided to write down the full value of its French Guiana asset, which was \$36.3 million. As of yearend 2014, the consortium had not announced a new drilling program (Institut d’Émission des Départements d’Outre-Mer, 2015a, p. 92; Northern Petroleum plc, 2015, p. 14).

Outlook

French Guiana's economy is expected to grow at a moderate rate over the next few years owing to the Ariane 6 space program that was planned to be commissioned in 2020. The construction sector is expected to recover and to remain stable in the coming years, which would likely result in moderate growth in demand for cement and other building materials. Gold output is expected to remain at the same level in the short term, and the startup of cyanide plants would increase the productivity of gold production. In the long term, gold production has the potential to increase if the Paul Isnard project can be implemented and other identified deposits can be developed. Petroleum exploration is facing uncertainties owing to discouraging results from previous drilling campaigns; further drilling activities are not expected in the short term (Institut d'Émission des Départements d'Outre-Mer, 2015b).

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TABLE 1
FRENCH GUIANA: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity ²		2010	2011	2012	2013	2014
Cement, hydraulic ^c	metric tons	89,064 ³	90,000	100,000	92,000	86,000
Gold, mine output, Au content	kilograms	1,160 ^r	1,298 ^r	1,147 ^r	1,220 ^r	1,220 ^e
Laterite		212 ^r	396 ^r	207 ^r	805 ^r	534
Sand, common		305 ^r	365 ^r	365 ^r	1,176 ^r	1,086
Stone, crushed		1,004 ^r	846 ^r	1,010 ^r	1,600 ^r	1,940

^eEstimated; estimated data are rounded to no more than three significant digits. ^rRevised.

¹Table includes data available through January 28, 2016.

²In addition to the commodities listed, French Guiana also produced clays, columbite, and tantalite, but available information was inadequate to make reliable estimates of output.

³Reported figure.

TABLE 2
FRENCH GUIANA: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Thousand metric tons unless otherwise specified)

Country		Major operating companies and major equity owners	Location of main facilities	Annual capacity ^c
Cement		Ciments Guyanais S.A. (Cementos Argos, 100%)	Clinker grinding plant at Degrad des Cannes, about 10 kilometers southeast of Cayenne	200
Gold	kilograms	Auplata S.A., 100%	Dieu Merci Mine, near Saint-Elie, about 120 kilometers west of Cayenne	600
Do.	do.	Société Minière Yaou Dorlin S.A.S. (Auplata S.A., 100%)	Yaou underground mine, about 225 kilometers southwest of Cayenne	NA
Do.	do.	Compagnie Minière Dorlin S.A.S. (Auplata S.A., 100%)	Dorlin placer mine, about 190 kilometers southwest of Cayenne	100
Do.	do.	Numerous legal and illegal placer mines	Various locations	1,000
Niobum (columbium) and tantalum	do.	do.	Various locations in northwestern French Guiana	1,500
Sand		About 10 sand pits	Various locations	NA
Stone, crushed		About nine rock quarries	do.	NA

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