THE MINERAL INDUSTRY OF GUINEA

By Karine M. Renaud

In December 2015, the World Health Organization (WHO) announced the end of the Ebola Virus Disease (EVD) outbreak in Guinea. In 2015, the country’s economy started to recover from the effects of the EVD outbreak as well as the sharp decline in commodity prices worldwide, and weak activity in the country’s manufacturing, mining, and trade sectors. The prices of Guinea’s major and prospective mineral export commodities, including bauxite, diamond, gold, and iron ore, decreased by between 30% and 60%. The lower commodity prices caused delays in projects related to iron ore (such as the Simandou project) and bauxite and severely curtailed the production of gold (especially artisanal production) (Kimberley Process Certification Scheme, 2014, 2015; World Health Organization, 2015; International Monetary Fund, 2016a, p. 5, 15).

Guinea is endowed with a variety of mineral resources, such as bauxite, cobalt, copper, diamond, gold, heavy mineral sands, iron ore, lead, and limestone. The country’s most economically important mineral deposits were bauxite, diamond, and gold. Guinea reportedly had the world’s largest proven bauxite reserves, which were estimated to be 7.4 billion metric tons (Gt) (Bray, 2017; Ministry of Mines and Geology, 2017, p. 4). The country’s proven iron ore reserves were estimated to be 20 Gt containing 66% to 68% iron content, and its diamond reserves were estimated to be between 25 million and 30 million carats (Ministry of Mines and Geology, 2017, p. 5, 7).

In 2015, minerals mined in Guinea included bauxite, diamond, and gold. In 2015, Guinea was ranked sixth in the world in bauxite production and accounted for 6% of the world’s output of bauxite. The country ranked 14th in the world in the production of diamond. The mineral-processing industry produced alumina and cement (table 1; Kimberley Process Certification Scheme, 2015; Bray, 2017; Olson, 2017).

Minerals in the National Economy

Guinea’s real gross domestic product (GDP) increased by 0.1% in 2015 compared with an increase of 1.1% in 2014; the nominal GDP was $6.7 billion. The value added (at constant 2010 prices) of the mining sector was 51.1% in 2015 compared with 55.3% in 2014. The growth rate of value added of the mining sector was −4.0% in 2015 compared with 11.0% in 2014. The growth rate of value added of metal mining was −4.8% in 2015 compared with 11.2% in 2014. The mining sector contributed −0.5% to real GDP in 2015 compared with 1.2% in 2014. The total estimated foreign direct investment (FDI) inflow was $85 million in 2015 compared with $68 million in 2014, and $135 million in 2013 (Institute of National Statistics, 2015a, p. II, V, VIII; International Monetary Fund, 2016b, p. 234; World Bank, The, 2016; Bray, 2017, p. 33).

Exports totaled $1.7 billion in 2015 compared with $2.0 billion in 2014, and imports totaled $2.4 billion in 2015 compared with $2.6 billion in 2014. In 2015, exports of mineral commodities increased by 31% to $736.4 million from $627.8 million in 2014 and accounted for 23% of total exports. Imports of mineral commodities decreased by 30% to $519.5 million from $831.5 million in 2014. The country’s main export partners were Ghana (received 22% of Guinea’s exports), India (16%), the United Arab Emirates (UAE) (10%), and Spain (9%). The country’s main import partners were the Netherlands (supplied 18% of Guinea’s imports), China (15%), India (10%), Belgium (7%), and France and the UAE (6% each) (Institute of National Statistics, 2015b, p. 4, 7, 8, 11, 13, 14, 16, 17, 19, 20, 21).

Government Policies and Programs

The Ministère des Mines et de la Géologie (Ministry of Mines and Geology) was the Government agency in charge of overseeing the implementation of Guinea’s Mining Code, and the Société Guinéenne du Patromoine Minier (Soguipami) [Guinean Mining Heritage Society] was the company in charge of acting on behalf of the Government in all mining ventures and of promoting Guinea’s mineral sector abroad. The legislative framework for Guinea’s mineral sector is provided by law L/2013/053/CNT of April 2013. Guinea’s amended Mining Code committed the country to increase transparency in the mining sector, reduce taxes and royalties, and hire Guinean residents (Law Library of Congress, The, 2013; U.S. Department of State, 2016, p. 26).

Production

Bauxite mined (wet and dry basis) production decreased by 6% in 2015. Cement production was estimated to have increased by nearly 15%, and diamond, by 2%. Data on mineral production are in table 1.

Structure of the Mineral Industry

Guinea’s mining and mineral-processing operations were mostly privately owned, although with some Government ownership. Artisanal miners mined diamond and gold at various locations throughout the country. Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Bauxite and Alumina.—In 2015, Guinea was ranked first in the world in bauxite reserves (7.4 Gt) and accounted for 26% of the world’s total reserves. The Sangaredi Mine, which was the largest mine in Guinea in terms of output, was operated by Compagnie des Bauxites de Guinée (CBG) (the leading bauxite producer in Guinea) through a consortium of companies, including Canada-based Rio Tinto Alcan Inc.,
United States-based Halco Mining Inc., and Channel Islands [United Kingdom]-based Dadco Group. CBG was owned by Halco Mining, which was a joint venture of Alcoa Inc. of the United States, Rio Tinto plc of the United Kingdom, and the Dadco Group of Germany (51%), and the Government of Guinea (49%). As of 2015, the total bauxite reserves at the Sangaredi Mine were estimated to be 372 million metric tons (Mt) grading 48.5% Al₂O₃, including 104 Mt of proved reserves grading 48.8% Al₂O₃ and 267 Mt of probable reserves grading 48.4% Al₂O₃. The mine produced 14.6 Mt of bauxite in 2015 compared with 15.8 Mt in 2014, which was 4% more than the mine’s reported nameplate annual capacity of 14 million metric tons per year (Mt/yr) (Africaguinee.com, 2015; Rio Tinto plc, 2016a, p. 25, 214, 217; United Nations Conference on Trade and Development, 2016, p. 73; Bray, 2017).

In 2015, the joint venture of Guinea Alumina Corp. S.A. (GAC) [a subsidiary of Emirates Global Aluminum (EGA)] and CBG was working on the Boke expansion project in the Boke region. CBG held a 22.95% share of the Boke expansion project, which had probable reserves estimated to be 39.5 Mt and proven reserves of 23.2 Mt grading 48.5% Al₂O₃ (Alcoa Inc., 2015, p. 4; Guinea Alumina Corp. S.A., 2017).

In March 2015, United Company RUSAL plc (RUSAL) of Russia launched the first phase of the Dian-Dian bauxite project. The project, which included the construction of a 3-Mt/yr bauxite mine, was scheduled to be completed in 2018. The second phase of the project would include the rampup of bauxite production to 6 Mt/yr, and the third phase, the construction of a 1.2-Mt/yr alumina refinery. The fourth and final phase of the project, which was dependent upon favorable mineral market conditions, would include a capacity expansion at the alumina refinery to 2.4 Mt/yr and a capacity expansion at the bauxite mine to 12 Mt/yr. As of December 2015, the mineral resources at Dian-Dian were estimated to be 690 Mt, including measured resources of 402 Mt; indicated, 71 Mt; and inferred, 217 Mt. In 2015, RUSAL took preventative measures to protect mining staff from contracting the EVD and it announced the completion of the construction of the Centre for Epidemic and Microbiological Research and Treatment in the Kindia region (United Company RUSAL plc, 2015a, p. 25; 2015b, 33–34, 36; 2015c; 2016, p. 12; Reuters Africa, 2016).

In 2015, Alliance Mining Commodities Ltd. (AMC) of Australia contracted with Intech Engineers of Australia to determine the successful way to develop the Koumbia bauxite project. AMC held a 90% interest in the project. A mining license for the development of the project had been granted to AMC in July 2014. As of yearend, AMC was seeking investors to fund the project. Capital costs were estimated to be $951 million (Alliance Mining Commodities Ltd., 2014; 2015, p. 7; Intech Engineers, 2015).

During the year, Anglo-African Minerals plc of the United Kingdom carried out exploration programs for its wholly owned subsidiary Forward Africa Resources (FAR) on the FAR, Somaly, and Toubal projects, which are located in the Dubreka and Kindia Prefectures. As of November 2015, the FAR project’s total JORC-compliant mineral resources were estimated to be 73 Mt of bauxite, including 26 Mt of measured resources, 11 Mt of indicated resources, and 36 Mt of inferred resources. The JORC-compliant inferred mineral resources for the Somalou project were estimated to be 459 Mt of bauxite grading 43% Al₂O₃. The JORC-compliant inferred resources for the Toubal project were estimated to be 722 Mt of bauxite grading 43% Al₂O₃. Further exploration and infrastructure construction were expected to be conducted in 2016 or 2017 (Anglo-African Minerals plc, 2016).

Gold.—Netherlands-based Nordgold N.V., which was the operator of the Lefa Mine, contributed to the increase in gold production by increasing the extraction of higher grade ores, increasing milled ore, and improving recovery rates at the processing plant. The production of gold at the Lefa Mine, which is located 700 km northeast of Conakry, increased by 4% to 6,660 kilograms (kg) in 2015 from 6,380 kg in 2014. As of December 2015, the Lefa-corridor stockpiles’ measured and indicated resources were estimated to be 4.4 Mt at a grade of 0.66 gram per metric ton (g/t) gold containing 2,294 kg of gold and the Lefa-corridor heap-leach resources were estimated to be 9.4 Mt at a grade of 0.52 g/t gold containing 4,931 kg of gold. Nordgold planned to invest $3.8 million in exploration at Lefa in 2016. During the year, the company continued to work on preventing the spread of Ebola. Nordgold established two awareness campaigns in 177 villages and a management emergency response plan, which outlined the actions to be taken by staff if suspected, probable, or confirmed cases of the EVD were detected within the perimeter of its operation. A total of 40 handwashing stations were set up throughout the mine site, electronic thermometers were established at various checkpoints, and staff was sensitized through weekly updated announcements (Nord Gold N.V., 2015a, p. 37, 42, 43, 84, 131, 181–182; 2015b, p. 64).

Production at the Siguiri Mine decreased to an estimated 7,930 kg compared with a revised 9,020 kg in 2014. The production decrease was attributed to the decrease in the recovery of higher grade ore owing to delayed access to the Soloni pit and maintenance. Production at the Siguiri Mine was expected to continue until 2018. As of December 2015, the total of mineral resources, including measured, indicated, and inferred, were estimated to be 191.8 Mt at a grade of 0.89 g/t gold and containing 171 metric tons (t) of gold. The mineral resources were estimated to be 99.7 Mt grading 1.02 g/t gold and containing 101 t of gold. In 2015, AngloGold Ashanti Ltd. of South Africa (the owner of the Siguiri Mine) continued production despite the EVD outbreak. The company conducted daily screening of the employees and restricted travel to and from the Siguiri Mine (AngloGold Ashanti Ltd., 2015, p. 82, 39, 82, 90–91; 2016, p. 85–86, 91–92; Mining-technology.com, 2017).
Avocet Mining plc of the United Kingdom was awarded a mining permit for the Tri-K gold project, which is located near Kankan, on March 27, 2015. The feasibility study indicated that the life of the mine was 7 years and the production capacity was 1,710 kilograms per year of gold. The reserves were estimated to be 7.9 Mt grading 1.89 g/t gold. As of yearend, Avocet Mining was seeking investors and operating partners to develop the project. The company required $60 million to finance construction of the Tri-K project (Avocet Mining plc, 2016, p. 11, 14, 23).

Iron Ore.—In 2015, the Simandou South (Blocks 3 and 4) iron ore project remained undeveloped owing to disputes and allegation of corruption. In 2014, joint-venture partners Rio Tinto (47%), Aluminum Corp. of China Ltd. (Chinalco) (41%), and the International Finance Corporation (IFC) (4.5%) had signed an investment framework contract with the Government of Guinea (7.5%) for the development of the Simandou South (Blocks 3 and 4) iron ore project. The contract was approved for ratification by the Guinean National Assembly in June 2014 and approved by the Executive branch and the Supreme Court in August 2014. The first stage in the development of the project included the completion of a bankable feasibility study and the establishment of a funding consortium to build associated infrastructure. The bankable feasibility study was expected to be submitted to the Government of Guinea in 2015; however, it was delayed owing to the EVD outbreak. The joint-venture partners were working to finalize the bankable feasibility study for the mine and infrastructure in 2015, and the final copy of the study was expected to be submitted to the Government in May 2016 (Burgis, 2016; Rio Tinto plc, 2016a, p. 37, 204; 2016b, p. 14; 2016c).

The Simandou South project is located 550 km southeast of Conakry, and the concession was held by Simfer S.A. The project was considered to host one of the world’s largest undeveloped high-grade iron ore deposits and was expected to produce about 100 Mt/yr of iron ore upon commissioning. As of 2015, total resources, including measured, indicated, and inferred, were estimated to be 835 Mt grading 65% iron. The project was expected to generate about $1.5 billion per year in Government revenue, to create about 4,500 direct jobs, and to employ 3,500 contractors. These estimated Government proceeds were based on long-term market forecasts for the production of 100 Mt/yr of iron ore at an average price of $75 per metric ton (free on board) (Rio Tinto plc, 2014a, p. 11, 14, 23; 2016a, p. 25; 2016c).

The Simandou South project would be developed in two stages, the first of which would include the development of the 50-Mt/yr Oueleba Mine. The second stage would consist of the development of the Pic de Fon deposit, the expansion of iron ore hauling capacity at the railway, capacity expansion at the deepwater port, and the ramp-up of production to the projected 100 Mt/yr. Project parameters, including related costs and a timeline, were to be provided by Rio Tinto upon completion of the bankable feasibility study. The Government would initially hold a 7.5% free-carried interest in the project, which it could gradually increase to a maximum of 15% during a period of 20 years or to 20% through a contributing interest. In 2015, SRK Consulting in collaboration with Rio Tinto was working on preparing a mineral resource estimate of Pic de Fon and Oueleba (Rio Tinto plc, 2014, p. 6, 23; 2016a, p. 23, 134; SRK Consulting, 2015).

On April 25, the Government revoked the mining licenses for joint-venture partners BSG Resources Ltd. (BSGR) of the United Kingdom and Vale S.A. (Vale) of Brazil for the Simandou North (Blocks 1 and 2) and Simandou South (Zogota) iron ore projects. The licenses were revoked after a Government-appointed technical committee concluded that BSGR had illegally obtained the rights to the two concessions in 2010. BSGR was barred from reapplying for the rights to the projects once the Government issued a new bidding round. The Government’s decision, however, did not prohibit Vale from participating in any future bidding rounds as Vale, which had acquired a majority interest in the projects from BSGR by paying $500 million and committing a total of $2.5 billion upon achievement of specific milestones, was not implicated in the committee’s findings. Vale, however, reported that it was considering its legal rights and options regarding the Government’s decision. On December 12, BSGR announced it had initiated legal action to seek a judicial review of the decisions made by the Government of Guinea in revoking its mining licenses (BSG Resources Ltd., 2014a, 2014b; Burgis, 2014; Kieran, 2014; Vale S.A., 2015, p. F–51, 76).

On April 30, 2014, Rio Tinto had filed a lawsuit with the U.S. District Court for the Southern District of New York against Vale and BSGR, its subsidiaries in Guinea, and other private citizens for the loss of its mining rights to the Simandou North (Blocks 1 and 2) and Simandou South (Zogota) projects in late 2008. Rio Tinto had held the mining rights to these blocks until December 2008, when the Government canceled the company’s mining licenses to the projects and granted them to BSGR. In 2015, the U.S. District Court for the Southern District of New York dismissed Rio Tinto’s lawsuit (Rio Tinto plc, 2014, p. 44; Soto and Pierson, 2015).

United Kingdom-listed Sable Mining Africa Ltd. continued to work on the development of the Nimba iron ore project. As of December 2015, the total JORC-compliant resources were estimated to be 205.2 Mt of iron ore grading 57.8% iron at a 40% cutoff rate. The Nimba project is located in southeastern Guinea near the border with Liberia and Côte d’Ivoire and consists of a near-surface hematite banded iron formation deposit. Iron ore production from Nimba was expected to begin in late 2016 at a rate of 3 Mt/yr. In 2014, an Interministerial Decree signed by the Governments of Guinea and Liberia granted Sable Mining the rights to export iron ore from Nimba through the Port of Buchanan. Iron ore would be hauled 65 km by road to a transfer yard near Yekepa, Liberia, where the ore would be stockpiled and then loaded onto rail cars. From Yekepa, the ore would be transported 18 km by rail to the shared rail line at Tokadeh in Liberia and from there to the Port of Buchanan for export. A memorandum of understanding for the use, rehabilitation, and expansion of the rail line connecting Yekepa to the Port of Buchanan was also signed during the year (Sable Mining Africa Ltd., 2014; 2015, p. 1, 5).

In 2015, the Forecariah Mine (a joint venture between Bellzone Mining plc of Jersey [United Kingdom] and China International Fund Ltd.) was liquidated by the Singapore High Court. Bellzone had already begun shifting its priorities to the
development of its more prospective Guinean mining asset, the Kalia iron ore project and, in 2015, Bellzone announced that it was fully funded through 2016 to continue with the next steps in the development of the Kalia deposit. As of October 2015, the estimated high-grade indicated and inferred resources were 124.2 Mt grading 53.5% iron. The total mineral resources of the oxide and supergene banded iron formations were estimated to be 913.2 Mt grading 36.3% iron, and the resources of the magnetite banded iron formation were estimated at 4.72 Gt grading 29.3% iron (Bellzone Mining plc, 2015, p. 4, 6, 42; 2016, p. 2, 5).

In 2015, ArcelorMittal S.A. of Luxembourg decided to terminate the financial transaction for the Mount Nimba iron ore project because the key conditions to closing were not met by the deadline. On July 29, ArcelorMittal acquired BHP’s (formerly BHP Billiton of Australia and the United Kingdom) 43.5% interest and Areva Group of France’s 13% interest in Euronimba Ltd. Euronimba held 95% of the mining rights to the Mount Nimba project. The remaining 43.5% interest in Euronimba was owned by Newmont Mining Corp. of the United States. Mount Nimba’s resources were estimated to be 935 Mt of direct-shipping ore grading 63.1% iron. The project is located in southeastern Guinea near the border with Liberia (Arcelor Mittal S.A., 2015a, p. 33; 2015b).

**Industrial Minerals**

**Diamond.**—In 2015, Stellar Diamonds Plc of the United Kingdom continued to be engaged in exploration, development, and production of diamond properties, such as the Baoule Kimberlite Pipe project, the Bomboke Mine, the Droujba Mine, and the Mandala Mine. After long rainy seasons, Stellar Diamonds resumed trial mining operations at Baoule. The company was expected to mine and process 100,000 t of kimberlite from a 5-hectare pipe. In 2015, 46,500 t of kimberlite from the east lobe and 26,000 t from the west lobe were processed and yielded 9,300 carats. The Bomboke, Droujba, and Mandala projects were on care-and-maintenance status in 2015. The export value of diamond decreased by 33% to $18.7 million in 2015 compared with $27.8 million in 2014. The price in U.S. dollars per carat decreased by 34% to $113.49 per carat compared with $171.50 per carat in 2014 (Kimberley Process Certification Scheme, 2014, 2015; Stellar Diamonds plc, 2015a, p. 2, 3, 9–10; 2015b, p. 4, 37).

**Mineral Fuels and Related Materials**

**Petroleum.**—Guinea did not produce or refine petroleum and was dependent upon imports for its petroleum requirements; however, offshore petroleum exploration was ongoing in the country. In March, Tullow oil plc of the United Kingdom declared force majeure on its offshore exploration block in Guinea. Exploration operations were temporarily halted following Tullow’s notice to its partner, Houston-based Hyperdynamics Corp., of an investigation by the U.S. Department of Justice (DOJ) and the U.S. Securities and Exchange Commission (SEC) into the activities of Hyperdynamics in obtaining and retaining its concession rights to the block. The force majeure was lifted in May, and as of yearend, operations were pending further discussions with the Government. In 2015, the DOJ closed its investigation into possible violations of the Foreign Corrupt Practices Act and no charges were filed against the company. The SEC did not conclude its investigation. Tullow held a 40% operating interest in the concession. Hyperdynamics, through its subsidiary SCS Corp., and Korean National Oil Corp., through its subsidiary Dana Petroleum (E&P) Ltd., held a 37% and a 23% interest in the concession, respectively (Hyperdynamics Corp., 2014; 2015, p. 1; Tullow Oil plc., 2015, p. 53).

**Uranium.**—In 2015, Forte Energy NL of Australia did not undertake significant exploration of the Firawa concession area owing to limited financing, a weak uranium market, and the EVD outbreak. Firawa, which is also prospective for rare-earth-element mineralization, is located 25 km east of Kissidougou and consists of two licenses covering 286 square kilometers. The revised JORC-compliant inferred mineral resource estimate for Firawa was 30.3 Mt grading 295 parts per million (ppm) U3O8 and containing 8,845 t of U3O8 at a 100-ppm cutoff grade (Forte Energy NL, 2015, p. 13, 14; 2016, p. 7).

**Outlook**

The International Monetary Fund estimates that Guinea’s GDP growth will rebound to 3.7% in 2016, based partly on the expected eradication of the EVD, an increase in bauxite production, and the execution of a construction contract. According to the U.S. Department of State, the new investment in CBG, in addition to new market entries, are expected to significantly increase Guinea’s bauxite output during the next 5 to 10 years. Low international prices for Guinea’s key mineral export commodities, however, if sustained, could delay the commissioning of mining projects under development, including alumina, bauxite, and iron ore projects, and deter future foreign direct investment in the mineral sector. The cancellation or significant delay of these projects would be a major setback to the Guinean economy. At a level of output of 100 Mt/yr of iron ore and based on 2013 levels of world mine production data by the country, the Simandou South (Blocks 3 and 4) project alone has the potential to place Guinea among the world’s top 10 iron ore producers and transform its economy. Capital expenditures for the construction of associated infrastructure to develop not only the Simandou South project but other bauxite and iron ore mineral projects represent a significant proportion of the cost companies must bear not only to access these mineral resources but to get them to international markets. These costs will continue to exert financial pressure on mining companies and potential investors and have the potential to delay the commissioning of mineral projects (Bermúdez-Lugo and Menzie, 2015; International Monetary Fund, 2015, p. 10, 14; 2016a, p. 1, 7; 2016b, p. 234).

**References Cited**


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**TABLE 1**

**GUINEA: PRODUCTION OF MINERAL COMMODITIES**

(Thousand metric tons unless otherwise specified)

<table>
<thead>
<tr>
<th>Commodity</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumina</td>
<td>574</td>
<td>150</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Bauxite, mine production</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wet basis</td>
<td>17,440</td>
<td>17,823</td>
<td>18,763</td>
<td>19,175</td>
<td>18,114</td>
</tr>
<tr>
<td>Dry basis</td>
<td>15,700</td>
<td>16,000</td>
<td>16,900</td>
<td>17,300</td>
<td>16,300</td>
</tr>
<tr>
<td>Cement</td>
<td>365</td>
<td>317</td>
<td>377</td>
<td>435</td>
<td>500</td>
</tr>
<tr>
<td>Diamond</td>
<td>303,785</td>
<td>266,800</td>
<td>202,365</td>
<td>164,059</td>
<td>166,880</td>
</tr>
<tr>
<td>Gold, mine output, Au content</td>
<td>15,695</td>
<td>14,790</td>
<td>15,147</td>
<td>16,955</td>
<td>17,000</td>
</tr>
</tbody>
</table>

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*Estimated; estimated data are rounded to no more than three significant digits. *Revised. -- Zero.
**Table includes data available through March 17, 2017.
*In addition to the commodities listed, modest quantities of crude construction materials (clay, gravel, sand, and stone), granite, iron ore, and salt were produced, but information was inadequate to make reliable estimates of output.
*Bauxite production numbers published in previous Minerals Yearbooks were based on shipments. In this year's table, reported production numbers were available. The production numbers published in the 2014 Minerals Yearbook were as follows: 2011—15.6 million metric tons (Mt); 2012—17.9 Mt; 2013—18.5 Mt; and 2014—18.8 Mt.
*Metallurgical ore was estimated to be 13% water.
*Data for wet-basis ore were estimated to be 13% water reduced to about 7% water for dry basis.
*Reported figures by Banque Centrale, Ministères du Plan, de l'Économie et des Finances.
*Reported figures by Institut National de la Statistique. Production was approximately 70% to 80% gem quality; includes artisanal production.
*Does not include artisanal gold mine production, which has historically ranged between 1,500 and 5,000 kilograms per year.
### TABLE 2

**GUINEA: STRUCTURE OF THE MINERAL INDUSTRY IN 2015**

(Metric tons unless otherwise specified)

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Major operating companies and major equity owners</th>
<th>Location of main facilities</th>
<th>Annual capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumina</td>
<td>Friguia S.A. (United Company RUSAL plc, 100%)</td>
<td>Friguia alumina refinery, ¹ Fria</td>
<td>650,000</td>
</tr>
<tr>
<td>Bauxite</td>
<td>Compagnie des Bauxites de Guinée (CBG)</td>
<td>Sangaredi Mine, Kamsar</td>
<td>14,000,000</td>
</tr>
<tr>
<td></td>
<td>Halco Mining Inc. (Alcoa Inc., 45%; Rio Tinto plc, 45%; Dadco Group, 10%; and Government, 49%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Do. Compagnie des Bauxites de Kindia S.A. (CBK) (United Company RUSAL plc, 100%)</td>
<td>Debele Mine, Kindia</td>
<td>3,400,000</td>
</tr>
<tr>
<td></td>
<td>Do. Friguia Bauxite and Alumina Complex (United Company RUSAL plc, 100%)</td>
<td>Friguia Mine, ¹ Fria</td>
<td>2,100,000</td>
</tr>
<tr>
<td>Cement</td>
<td>Ciments de Guinée S.A. (LafargeHolcim Ltd., 59.9%, and Government, 40.1%)</td>
<td>Conakry grinding plant, 35 kilometers from the Port of Conakry</td>
<td>300,000</td>
</tr>
<tr>
<td></td>
<td>Do. Ciments d'AFrique (CIMAF)</td>
<td>Dubreka industrial zone, 40 kilometers from Conakry</td>
<td>500,000</td>
</tr>
<tr>
<td>Diamond</td>
<td>Association pour la Recherche et l'Exploitation du Diamant et de l'Or (Batax Bouna International Mining Corp.)</td>
<td>Aredor Mine</td>
<td>38,000</td>
</tr>
<tr>
<td></td>
<td>Do. do. Artisanal miners</td>
<td>Mainly in Banankoro</td>
<td>NA</td>
</tr>
<tr>
<td>Gold</td>
<td>Société AngloGold Ashanti de Guinée SA (AngloGold Ashanti Ltd., 85%, and Government, 15%)</td>
<td>Siguiri Mine, 850 kilometers northeast of Conakry</td>
<td>10,600</td>
</tr>
<tr>
<td></td>
<td>Do. do. Société Minière de Dinguiraye (Nordgold N.V., 85%, and Government, 15%)</td>
<td>Lefa (Lero-Karta) Mine, 700 kilometers northeast of Conakry</td>
<td>6,400</td>
</tr>
<tr>
<td></td>
<td>Do. do. Semafo Guinée S.A. (New Dawn Mining Corp., 85%, and Government, 15%)</td>
<td>Kiniero Mine, ² 650 kilometers east of Conakry</td>
<td>1,250</td>
</tr>
<tr>
<td></td>
<td>Do. do. Artisanal miners</td>
<td>Various locations throughout the country, including the town of Kouremale, located near the border with Mali</td>
<td>NA</td>
</tr>
<tr>
<td>Iron ore</td>
<td>Forécariah Guinea Mining S.A. (Bellzone Mining plc, 42.5%; China International Fund Ltd., 42.5%; and Government, 15%)</td>
<td>Forécariah Mine, ³ 160 kilometers southeast of Conakry</td>
<td>1,000</td>
</tr>
</tbody>
</table>

¹ On care-and-maintenance status since 2012.
² The mine was sold to New Dawn Mining Corp. in 2014, and since 2014, production has been on hold.
³ The mine was closed and the company shares were liquidated.