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The Mineral Industry of Guinea

By Yadira Soto-Viruet

In 2010, Guinea was ranked fifth among the world's leading producers of bauxite, 12th among the world's leading producers of rough diamond, by volume, and 13th among the world's leading producers of rough diamond, by value (Bray, 2011; Kimberley Process Certification Scheme, 2011). Other mineral commodities produced in the country included cement, gold, and salt. The country's undeveloped mineral resources included graphite, iron ore, limestone, manganese, nickel, and uranium.

Government Policies and Programs

The Ministère des Mines et de la Géologie (formerly Ministère des Mines, de la Géologie et de l'Environnement; the name was changed in 2010) was the Government agency responsible for the administration of the mining sector. Guinea's Mining Code, which was based on French civil law, was last revised and amended in 1995 and 1998, respectively. The Government is entitled to a "founder's share" in all gold, diamond, and other precious stone mining activities. The founder's share equals 15% of the capital of the operating company, and no financial contribution may be required from the Government for this share. For bauxite, iron ore, and solid hydrocarbons, no such free share is authorized. The Government is entitled to a stake in the exploitation of these mineral commodities, but the terms are negotiated with the investor. Both the previous military junta and the transition Government have declared that all the contracts must allow for "a sufficient percentage of capital" to be returned to the Government. The Government pledged to review all mining contracts signed from 2006 to the present. The Mining Code was under revision in 2010 (U.S. Department of State, 2010; 2011a, b).

The Petroleum Code of September 23, 1986 (Code Petrolier du 23 Septembre 1986), continued to be under revision in 2010 by a commission consisting of members from the Ministry of Commerce, the Ministry of Environment, the Office of the President, and other Government cabinets. The Petroleum Code provides the legal framework for the exploration and mining of all liquid and gaseous hydrocarbons. Under the Code, companies exploring for or mining hydrocarbons in Guinea may negotiate with the Government for exemptions from taxes and customs duties (U.S. Department of State, 2009, 2010).

Production

In 2010, alumina production increased by 13% to 597,000 metric tons (t) from 530,000 t in 2009 and bauxite production increased by 12% to 17.4 million metric tons (Mt) from 15.6 Mt in 2009. Diamond production decreased by 46% to 374,000 carats from 697,000 carats in 2009. Cement production decreased by 20% to 237,000 t from a revised 298,000 t in 2009. Gold production, which excluded production from artisanal mining, decreased by 16% to 15,217 kilograms (kg) from 18,091 kg in 2009. Data on mineral production are in table 1.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Mineral Trade

In 2010, Guinea's exports to the United States were valued at about $68.5 million compared with about $67.3 million in 2009. Of this amount, bauxite and alumina accounted for about $62.4 million, or 91% of the country's total exports to the United States, by value; gold accounted for about $293,000; and gem-quality diamond accounted for about $572,000. Imports from the United States were valued at about $85.2 million in 2010 compared with $94.8 million in 2009; these included $112,000 in iron and steel products, $1.0 million in drilling and oilfield equipment, and $6.9 million in excavating machinery (U.S. Census Bureau, 2011a, b).

Commodity Review

Metals

Bauxite and Alumina.—Alumina Company of Guinea (ACG), Compagnie des Bauxites de Guinée (CBG), and Compagnie des Bauxites de Kindia (CBK) were the three bauxite producers that were operating in the country. ACG and CBK were 100% owned by United Company RUSAL (RUSAL) of Russia, and CBG was a joint venture between United States-based Halco Mining Inc. (51%) and the Government (49%).

Anglo Aluminum Corp. of Canada (formerly Navasota Resources Ltd.; the name was changed in 2010) held bauxite exploration permits for the 406-square-kilometer (km^2) Koba bauxite project and the 130-km^2 Koumbia bauxite project, which are located on the Boke bauxite belt in northwestern Guinea. The company also held exploration permits for the 1,832-km^2 Mamou-Dalaba bauxite project, which is located in southwestern Guinea about 100 kilometers (km) east of the capital city of Conakry. In November, Anglo Aluminum announced an updated estimate for the indicated resources at its Koba project of 501 Mt at an average grade of 42.90% Al_2O_3, 2.79% SiO_2, and 27.81% Fe_2O_3. Inferred resources were estimated to be 65.1 Mt at an average grade of 43.69% Al_2O_3, 2.75% SiO_2, and 26.91% Fe_2O_3. The company also announced initial bauxite resources for its Koumbia project, which is located about 40 km north of Koba. Indicated resources were estimated to be 129.8 Mt at an average grade of 48.40% Al_2O_3, 1.90% SiO_2, and 19.80% Fe_2O_3. The resource study was conducted by Coffey Mining of Australia. The updated resources were added to the initial resource estimate completed

by Scott Wilson Roscoe Postle Associates Inc., which was part of the Scott Wilson Mining Group. A preliminary economic assessment was underway for both projects (Anglo Aluminum Corp., 2010a, b).

In March, Anglo Aluminum acquired a 100% interest in the Mamou-Dalaba bauxite project from Société Guinéenne de Fer et de Bauxite. In November, the company announced that moderate- to high-grade bauxite assays were obtained from the initial core drilling at Mamou-Dalaba. The tests were conducted on nine plateaus covering less than 20% of the permitted area. The initial drill program was conducted to test priority targets identified through satellite imagery analysis. Highlights included 15 meters (m) grading 43.79% Al_2O_3, 10 m grading 41.53% Al_2O_3, and 8 m grading 46.81% Al_2O_3. Anglo Aluminum planned to conduct additional drilling with the collaboration of Coffey Mining (Anglo Aluminum Corp., 2010a, c).

Global Alumina Corp., which was a joint venture of BHP Billiton Ltd. of Australia and Global Alumina International Ltd. of Canada (33% each), Dubai Aluminium Company Ltd. (25%), and Mubadala Development Company PJSC of the United Arab Emirates (8.3%), signed port and infrastructure agreements with the Government in 2010. The port agreement includes the terms for the construction and use of a port installation, which would be located in the town of Kamsar; the infrastructure agreement outlines the terms for the expansion, improvement, and use of the existing rail and dock infrastructures by Guinea Alumina. The joint venture also signed an operation agreement with CBG. The operation agreement specifies the practice, logistics, and methods of upgrading and operating the existing port and railway infrastructure. The joint venture planned to develop a bauxite mine with a production capacity of about 10 million metric tons per year (Mt/yr) and one alumina refinery, which would be located near Sangaredi in the town of Boke. The refinery was expected to be capable of producing 3.3 Mt/yr of alumina initially; the production capacity would be increased to 3.6 Mt/yr of alumina within 5 years and then gradually to 3.95 Mt/yr. Measured and indicated resources based on the Australasian Joint Ore Reserves Committee's (JORC's) Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) were estimated to be 87 Mt and 113 Mt of laterite, respectively. Inferred resources were estimated to be 327 Mt of laterite. A bankable feasibility study was underway (Global Alumina Corp., 2010, 2011; Mining Journal, 2010; BHP Billiton Ltd., 2011).

Gold.—The Siguiri gold mine, which is located in the Siguiri district about 850 km northeast of Conakry in northeastern Guinea, produced a total of 9,984 kg of gold in 2010 compared with 11,571 kg in 2009. The open pit mine was 85% owned by AngloGold Ashanti Ltd. of South Africa. The decrease in production during 2010 was attributable to the mining of lower grade ore mined in the Sintroko and the Tubani pits and by lower drawdown rates, which affected geotechnical stability and caused the failure of the main ramp of Sintroko pushback 1. This delay halted the mining operations in the area from August to November 2010. Scoping studies were underway to optimize and expand the metallurgical processing capability of the Siguiri Mine. The company also planned additional studies to determine options to improve the plant's throughput by 2011. AngloGold Ashanti continued soil sampling and drilling exploration around the Siguiri Mine on Blocks 2, 3, and 4 during 2010 in an attempt to delineate new targets. Attributable gold production for 2011 was expected to be between 8,398 kg and 8,740 kg (AngloGold Ashanti Ltd., 2010; 2011, p. 54, 90).

Cassidy Gold Corp. of Canada held a 100% interest in the Kouroussa gold project, which is located in northwestern Guinea about 570 km east of Conakry. In October, the Government granted Cassidy a 2-year exploration permit renewal for the Kouroussa project, which covers an area of about 949 km^2. Coffey Mining completed a resource estimate in 2008. Indicated resources were estimated to be 11.4 Mt of ore at an average grade of 1.9 grams per metric ton (g/t) gold, and inferred resources were estimated to be 6.5 Mt of ore at an average grade of 1.7 g/t gold. A scoping study, which was conducted by Coffey Mining in 2009, estimated that production at Kouroussa would average 2,240 kilograms per year (kg/yr) during a 6-year mine life. The study proposed open pit mining and the construction of a plant with a design capacity to process 1.0 Mt/yr of ore. Initial capital costs for the Kouroussa project were estimated to be $97 million, with an additional $11 million estimated for sustaining capital. Cassidy initiated a new scoping study and planned to be evaluating a new exploration program by 2011 (Cassidy Gold Corp., 2010, 2011).

Canada-based Semafo Inc., which held an 85% interest in the Kiniero Mine through its subsidiary Semafo Guinée S.A., produced about 936 kg of gold in 2010 compared with about 995 kg of gold in 2009. The mine, which is located about 650 km east of Conakry, commenced operations in 2002. As of December 2010, measured mineral resources were estimated to be 1.4 Mt of ore at an average grade of 2.30 g/t gold, and indicated mineral resources were estimated to be 8.6 Mt of ore at an average grade of 1.96 g/t gold. Additional cash investments at the Kiniero Mine were temporarily suspended owing to the country's socio-political situation in 2010. In the fourth quarter of 2010, the company decided that certain expenditures would be made to maintain the plant throughput. Semafo planned to conduct core and reverse-circulation drilling in the Gobelé A sector and the West-Balan D and E areas by 2011 (Semafo Inc., 2010, p. 9, 37; 2011a, p. 11; 2011b).

OAO Severstal Resources of Russia, through its subsidiary Nord Gold N.V., acquired 100% interest in London-based Crew Gold Corp., which owned the Lefa gold mine. The Lefa open pit mine is located about 700 km northeast of Conakry. The company planned the revision of potential targets by 2011 (OAO Severstal Resources, 2011, p. 72–73).

Iron Ore.—In April 2010, Vale S.A. of Brazil acquired a 51% interest in the Simandou South (Zogota) and Simandou North concessions, known as Blocks 1 and 2, from United Kingdom-based BSG Resources Ltd. In order to be granted the right to ship through Liberia, the joint venture planned the reconstruction of a 660-km railway line from Conakry to Kerouane for passengers and general cargo transportation. The first phase of the project would include the development of the Zogota Mine and the construction of a dry processing plant and about 100 km of railway to link mining operations to an existing railway in Liberia. Production was expected to begin in 2012 with an expected output of 2 Mt/yr of

iron ore. The joint venture planned to increase the production capacity at Simandou to 15 Mt/yr of iron ore by 2014. The second phase of the project would include the development of the Simandou Blocks 1 and 2 and the construction of an additional railway to connect the blocks with the Zogota Mine. The joint venture estimated that it would increase its iron ore production capacity to 50 Mt/yr by 2020 (Vale S.A., 2010; 2011, p. 67).

London-based Rio Tinto plc, through its subsidiary Simfer S.A., held a 95% interest in the southern concession of the Simandou iron ore project, known as Blocks 3 and 4, which is located in southeastern Guinea about 30 km south of Beyla. The International Finance Corp. held the remaining 5% interest in the project. On July 29, Rio Tinto signed a joint-venture agreement with Aluminum Corp. of China (Chinalco). Chinalco, through its subsidiary Alumina Corporation of China Ltd. (Chalco), would acquire a 47% interest in the new joint venture by providing $1.35 billion to fund the development and operation of the joint venture's Simandou facility during the next 2 to 3 years. Thereafter, the effective interest of Rio Tinto and Chalco in the joint venture's Simandou project would be 50.35% and 44.65%, respectively. The Government held an option to acquire up to 20% interest in the project. The Simandou project would include the construction of a mine, a railway, and port infrastructure to support iron ore mining operations (Rio Tinto plc, 2010a, b).

As of 2010, Rio Tinto had reportedly spent more than $700 million on exploration, environmental, community development, and evaluation work at Simandou. As of December, the company reported measured mineral resources of 330 Mt of ore at an average grade of 67.2% iron. Indicated mineral resources were estimated to be 1,335 Mt of ore at an average grade of 65.7% iron, and inferred mineral resources were estimated to be 728 Mt of ore at an average grade of 66.1% iron. The Simandou project was expected to be in operation by 2015 and to produce about 95 Mt/yr of iron ore (Rio Tinto plc, 2010a, b; 2011, p. 59, 90).

Australia-based Bellzone Mining plc continued with its plan to develop the 50-Mt/yr Kalia iron ore project, which is located about 360 km east of Conakry. The Kalia project included the construction of a mine, a railway, and port infrastructure. In June, Bellzone announced that it had signed an infrastructure accord with the Government for the exclusive right to complete technical and economic feasibility studies for the rail and port infrastructure required to support its Kalia project. In July, a mining convention for the Kalia Mine and associated infrastructure was approved and signed by the Government. The mining convention included the right to extract, process, treat, transport, and sell iron ore. In August, Bellzone and China International Fund Ltd. (CIF) signed a joint-venture agreement to develop and fund the estimated $2.7 billion port, railway line, and associated infrastructure for the Kalia project. In September, Bellzone announced an increase in the magnetite JORC resources from 2.4 billion metric tons (Gt) to 3.74 Gt in the central zone of the Kalia I deposit. Diamond drilling was completed, and the company expected to report updated JORC resources by the third quarter of 2011. The company began a socioeconomic and environmental impact assessment for the Kalia Mine in May and expected the assessment to be completed by the second quarter of 2011. In early December, Bellzone announced that TWP Australia Pty Ltd. and Australia-based Ausenco Ltd. would conduct jointly a detailed feasibility study for the Kalia Mine, which was expected to be completed by the fourth quarter of 2011. Bellzone expected to bring online 20 Mt/yr of direct shipping ore (DSO) capacity in 2014 and 10 Mt/yr of magnetite concentrator capacity in 2015. The company also envisioned increasing the DSO output to 30 Mt/yr in 2017 and increasing the magnetite concentrate capacity to 20 Mt/yr by 2018 (Bellzone Mining plc, 2010a-c).

The joint venture of Bellzone and CIF (50% each) held iron ore permits for the Forecariah project, which is located in southwestern Guinea. In December, Bellzone commissioned an independent geologist to design a resource development plan, which included mapping, surface sampling, and drilling. Several prospecting targets were identified, and initial resource studies were to be conducted on the Yomboyeli target. An exploration drilling program was underway, and the company expected to announce internal resource estimates and internal resource classifications by the third quarter of 2011. The Forecariah project included the construction of a mine, a plant, a road to the port site, and port infrastructure. The joint venture planned to begin production of iron ore by 2012 with an initial production of between 3 and 4 Mt/yr of oxide ore, which would be increased to 10 Mt/yr by 2013 (Bellzone Mining plc, 2011a, b).

In January, ArcelorMittal entered into initial discussions with BHP Billiton Ltd. of Australia to potentially combine their respective iron ore mining and infrastructure interests in Guinea into a single joint venture. In September, the companies announced the end of the discussions, stating that they were unable to reach a commercial agreement. The companies would continue pursuing their iron ore mining interests independently (ArcelorMittal, 2010a, b).

Rare-Earth Elements.—On November 22, Australia-based Forte Energy NL announced initial positive rare-earth element (REE) assay results from one metallurgical sample following a routine metallurgical analysis. On December 21, the company announced the results of five samples from previous drilling and concluded that additional assays were needed to determine the REE resources at the Firawa prospect. The company planned to conduct a re-assay project by January 2011 (Forte Energy NL, 2010a, b).

Industrial Minerals

Diamond.—Stellar Diamond plc of United Kingdom (formerly West African Diamonds plc; the name was changed in February 2010) owned the Bomboko alluvial diamond deposit and the Mandala Mine (located between the Macenta and the Keroune districts in southeastern Guinea). Trial mining at Bomboko, which is located in the Soumbaya area, produced a total of 5,116 carats from September 2009 to October 2010. Inferred resources at Bomboko were estimated to be 41,000 carats. Geologic mapping was underway, and potential resources areas were identified for trial mining. The results would provide information to determine the grade and diamond value distribution. In 2010, Stellar began to upgrade its Bomboko plant and planned to install an x-ray

flow sort machine in the fourth quarter of 2010. Production at the Mandala Mine began in April 2009, and 101,334 carats was produced from September 2009 to the third quarter of 2010. Measured resources at Mandala were estimated to be 147,000 carats at an average grade of 0.69 carat per cubic meter and indicated resources were estimated to be 529,000 carats at an average grade of 0.69 carat per cubic meter. During the year, the company made the decision to increase the mining rate, processing capacity, and diamond recovery rate at the Bomboko and Mandala Mines.

Stellar also held licenses for the Bouro North and the Droujba projects. Bouro is located about 1 km from the Mandala alluvial project and processing plant. The company expected to schedule a bulk sampling of the 5-km east-west Bouro North Dyke to test the diamond grade and value of the kimberlite by 2011. The Droujba kimberlite pipe is located about 60 km southeast of the Mandala Mine. Electromagnetic, gravity, and ground magnetic surveys had been conducted at Droujba, and the company planned to conduct a 3,000-m drilling program by November 2010. Stellar also planned to collect drill core samples for microdiamond analysis and to make a macrodiamond grade forecast (Stellar Diamond plc, 2011, p. 8–11, 16–17).

Mineral Fuels and Related Materials

Petroleum.—Houston-based Hyperdynamics Corp., through its subsidiary SCS Corp. held a 77% interest in offshore Guinea. In January, Hyperdynamics signed an assignment of participating interest (assignment) and joint-operating agreement with Aberdeen-based Dana Petroleum PLC for the acquisition of a 23% participating interest in Hyperdynamics' oil and gas concession. In May, the Government granted the assignment, and the production-sharing contract amendment was signed on March 25. Several companies placed bids to conduct the acquisition phase of a three-dimensional seismic survey on the company's offshore block. In early June, Hyperdynamics awarded the contract to Petroleum Geo-Service ASA of Norway. In August, the seismic survey, which covered an area of 3,635 km^2, began to acquire detailed images of the prospects and identify specific drilling locations. The collection of seismic data was expected to be completed by the first quarter of 2011 at a cost of $2.5 million. The first exploration well was expected to be drilled by late 2011 (Hyperdynamics Corp., 2010a, b; 2011, p. 1–4).

Uranium.—Forte Energy held four exploration permits in Guinea that were prospective for uranium and REE; these included the Bohoduo and Firawa projects. Forte Energy put its exploration work on hold in early 2009 owing to the uncertain political environment in the country. In 2009, the company announced an initial estimate based on the JORC for the Firawa project. The initial inferred mineral resource estimate was 17.7 Mt at 296 parts per million U_3O_8 for 5.2 million kilograms of contained U_3O_8. Preliminary mineralogical studies, which were conducted by Mineral Engineering Technical Services Pty Ltd. of Australia, showed that 99.99% of the contained uranium is hosted in the mineral crandallite (a calcium aluminum phosphate), which made up 27% of the composite sample tested. The company also conducted direct acid-leach tests, and initial results indicated uranium recovery rates of 67% from 8 hours of acid-leach testing. Forte Energy continued metallurgical studies aimed at optimizing the leaching to improve uranium recovery and reduce acid consumption. In 2010, the company began the process of rehabilitating several roads and bridges to facilitate the transport of drilling equipment to the site. Plans were underway to begin field activities at the Firawa prospect by 2011. Forte Energy planned to conduct an additional diamond drilling program to update mineral resources by the third quarter of 2011. Environmental and social studies were expected to begin in 2011 (Forte Energy NL, 2011, p. 8–9).

Outlook

Guinea's first democratic elections as well as activity in the mineral sector, particularly the ongoing bauxite and alumina projects, are likely to play significant roles in the country's economic development for the next 3 to 5 years. Plans to develop the country's gold, diamond, iron ore, petroleum, and uranium resources and to rehabilitate the country's infrastructure (including ports, railways, and roads) are all likely to attract foreign direct investment in the mineral sector and increase interest in nonfuel mineral prospecting.

References Cited

Anglo Aluminum Corp., 2010a, Anglo Aluminum acquires Mamou-Dalaba bauxite project, Guinea: Kamloops, British Columbia, Canada, Anglo Aluminum Corp. press release, March 19, 1 p. (Accessed June 6, 2011, at http://www.angloaluminum.com/Investors/news_releases/031910.html.)

Anglo Aluminum Corp., 2010b, Bauxite resources grow 46% at Anglo Aluminum's Koba bauxite project, Guinea: Kamloops, British Columbia, Canada, Anglo Aluminum Corp. press release, November 4, 1 p. (Accessed June 6, 2011, at http://www.angloaluminum.com/Investors/news_releases/110410.html.)

Anglo Aluminum Corp., 2010c, Management discussion and analysis: Kamloops, British Columbia, Canada, Anglo Aluminum Corp. press release, December 16, 9 p. (Accessed June 6, 2011, at http://www.angloaluminum.com/pdf/0907MD.pdf.)

AngloGold Ashanti Ltd., 2010, Q4 exploration update: Johannesburg, South Africa, AngloGold Ashanti Ltd., 8 p.

AngloGold Ashanti Ltd., 2011, 2010 annual report: Johannesburg, South Africa, AngloGold Ashanti Ltd., 393 p.

ArcelorMittal, 2010a, ArcelorMittal and BHP Billiton enter initial discussion to potentially combine iron ore interests in Liberia and Guinea: Luxembourg, ArcelorMittal press release, January 19, 1 p.

ArcelorMittal, 2010b, ArcelorMittal and BHP Billiton terminate discussions to combine assets in Liberia and Guinea: Luxembourg, ArcelorMittal press release, September 8, 1 p.

Bellzone Mining plc, 2010a, Bellzone secures mining conventional approval: Perth, Western Australia, Australia, Bellzone Mining plc press release, July 28, 4 p. (Accessed June 29, 2011, at http://www.bellzone.com.au/Portals/0/docs/Mining Convention 27 July 2010.pdf.)

Bellzone Mining plc, 2010b, Definitive agreements signed with China International Fund with the addition of a mine development financing package: Perth, Western Australia, Australia, Bellzone Mining plc press release, August 2, 5 p. (Accessed June 29, 2011, at http://www.bellzone.com.au/Portals/0/docs/RNS - Finalised Agreement 2 August 1010 clean.pdf.)

Bellzone Mining plc, 2010c, Infrastructure accord agreed with Republic of Guinea: Perth, Western Australia, Australia, Bellzone Mining plc press release, June 17, 3 p. (Accessed June 29, 2011, at http://www.bellzone.com.au/Portals/0/docs/Bellzone Infrastructure Accord 17 June 2010.pdf.)

Bellzone Mining plc, 2011a, Forecariah jv progress update: Perth, Western Australia, Australia, Bellzone Mining plc press release, June 17, 5 p. (Accessed June 29, 2011, at http://www.bellzone.com.au/Portals/0/docs/Forecariah Update 17 June 2011.pdf.)

Bellzone Mining plc, 2011b, Unaudited results for the year ended 31 December 2010: Perth, Western Australia, Australia, Bellzone Mining plc press release, March 1, 5 p. (Accessed June 29, 2011, at http://www.bellzone.com.au/Portals/0/docs/Full Year Results.pdf.)
BHP Billiton Ltd., 2011, 2010 annual report: Melbourne, Victoria, Australia, BHP Billiton Ltd., 300 p.
Bray, E.L., 2011, Bauxite and alumina: U.S. Geological Survey Mineral Commodity Summaries 2011, p. 26–27.
Cassidy Gold Corp., 2010, Guinea Government renews Cassidy's Kouroussa gold permits: Kamloops, British Columbia, Canada, Cassidy Gold Corp. press release, October 7, 2 p. (Accessed June 10, 2011, at http://www.cassidygold.com/s/NewsReleases.asp?ReportID=422451&_Type=News-Releases&_Title=Guinea-Government-Renews-Cassidys-Kouroussa-Gold-Permits.)
Cassidy Gold Corp., 2011, A growth oriented resource company focused on advancing the Kouroussa gold discovery in Guinea, West Africa: Cassidy Gold Corp. (Accessed June 24, 2011, at http://www.cassidygold.com/s/Home.asp.)
Forte Energy NL, 2010a, Operational update: Perth, Western Australia, Australia, Forte Energy NL press release, November 22, 3 p. (Accessed July 1, 2010, at http://www.forteenergy.com.au/files/files/220_Guinea_update_20101122.pdf.)
Forte Energy NL, 2010b, Rare earth assay results, Republic of Guinea: Perth, Western Australia, Australia, Forte Energy NL press release, December 21, 2 p. (Accessed July 1, 2010, at http://www.forteenergy.com.au/files/files/226_REE_assay_results20101221.pdf.)
Forte Energy NL, 2011, 2010 annual report: Perth, Western Australia, Australia, Forte Energy NL, 46 p.
Global Alumina Corp., 2010, Global Alumina announces signing of key agreements among Guinea Alumina Corporation, the Republic of Guinea and Compagnie des Bauxite de Guinée: Toronto, Ontario, Canada, Global Alumina Corp. press release, July 19, 2 p. (Accessed July 1, 2011, at http://www.globalalumina.com/PDF/Global-Alumina-Announces-Signing-of-Key-Agreements-July-19.pdf.)
Global Alumina Corp., 2011, Operations—Overview: Global Alumina Corp. (Accessed July 1, 2011, at http://www.globalalumina.com/oper_overview.php.)
Hyperdynamics Corp., 2010a, Hyperdynamics announces results of 3D seismic tender: Hyperdynamics Corp., press release, June 11, 1 p. (Accessed June 7, 2011, at http://files.shareholder.com/downloads/HDY/1283141100x0x381418/fa70fc6f-c19d-4497-85b4-181bca9ccc3f/HDY_News_2010_6_11_General_Releases.pdf.)
Hyperdynamics Corp., 2010b, Hyperdynamics to launch 3-D seismic survey offshore Guinea: Hyperdynamics Corp., press release, August 9, 2 p. (Accessed June 7, 2011, at http://files.shareholder.com/downloads/HDY/1283141100x0x394633/7364cfec-ed3e-4d25-92ad-45ff06f5ffbb/HDY_News_2010_8_9_General_Releases.pdf.)
Hyperdynamics Corp., 2011, Form-10K—2010: Securities and Exchange Commission, 232 p.
Kimberley Process Certification Scheme, 2011, Annual global summary—2010 production, imports, exports and KPC counts: Kimberley Process Certification Scheme, July 28, 1 p. (Accessed August 25, 2011, at https://kimberleyprocessstatistics.org/static/pdfs/AnnualTables/2010GlobalSummary.pdf.)
Mining Journal, 2010, Guinea Alumina signs infrastructure deals: Mining Journal, July 23, 9 p.
OAO Severstal Resources, 2011, Annual report and accounts 2010: Moscow, Russia, OAO Severstal Resources, 176 p.
Rio Tinto plc, 2010a, Rio Tinto and Chinalco subsidiary Chalco sign binding agreement for Simandou iron ore project joint venture: Melbourne, Victoria, Australia, Rio Tinto plc press release, July 29, 3 p. (Accessed June 21, 2011, at http://www.riotintosimandou.com/documents/Rio_Tinto_and_Chinalco_subsidiary_Chalco_sign_binding_agreement_for_Simandou_iron_ore_project_joint_venture.pdf.)
Rio Tinto plc, 2010b, Rio Tinto to invest US $170 million for the next stage of the Simandou iron ore project in Guinea: Melbourne, Victoria, Australia, Rio Tinto plc press release, August 3, 3 p. (Accessed June 22, 2011, at http://www.riotintosimandou.com/documents/PR825g_Rio_Tinto_to_invest_US_170m_for_the_next_stage_of_the_Simandou_iron_ore_project_in_Guinea.pdf.)
Rio Tinto plc, 2011, 2010 annual report: London, United Kingdom, Rio Tinto plc, 284 p.
Semafo Inc., 2010 management's discussion and analysis: Saint-Laurent, Quebec, Canada, Semafo Inc., 60 p.
Semafo Inc., 2011a, 2010 annual report: Saint-Laurent, Quebec, Canada, Semafo Inc., 27 p.
Semafo Inc., 2011b, Semafo to invest $39 million in exploration, including $30 million at Mana: Montreal, Quebec, Canada, Semafo Inc. press release, January 27, 2 p. (Accessed June 15, 2011, at http://www.semafo.com/pdfdb/press/132en.pdf.)
Stellar Diamond plc, 2011, 2010 annual report and accounts: Maiden Lane, London, Stellar Diamond plc, 68 p.
U.S. Census Bureau, 2011a, U.S. exports to Guinea from 2005 to 2009 by 5-digit end-use code: U.S. Census Bureau. (Accessed July 16, 2011, at http://www.census.gov/foreign-trade/statistics/product/enduse/exports/c7460.html.)
U.S. Census Bureau, 2011b, U.S. imports from Guinea from 2005 to 2009 by 5-digit-end-use code: U.S. Census Bureau. (Accessed July 16, 2011, at http://www.census.gov/foreign-trade/statistics/product/enduse/imports/c7460.html.)
U.S. Department of State, 2009, 2009 investment climate statement—Guinea: U.S. Department of State, February. (Accessed June 3, 2011, at http://www.state.gov/e/eeb/rls/othr/ics/2009/117437.htm.)
U.S. Department of State, 2010, 2010 investment climate statement—Guinea: U.S. Department of State, February. (Accessed June 3, 2011, at http://www.state.gov/e/eeb/rls/othr/ics/2010/138076.htm.)
U.S. Department of State, 2011a, 2011 investment climate statement—Guinea: U.S. Department of State, February. (Accessed July 29, 2011, at http://www.state.gov/e/eeb/rls/othr/ics/2011/157287.htm.)
U.S. Department of State, 2011b, Guinea: U.S. Department of the State background note, March. (Accessed June 3, 2011, at http://www.state.gov/r/pa/ei/bgn/2824.htm.)
Vale S.A., 2010, Vale aquires Simandou iron ore assets: Rio de Janiero, Brazil, Vale S.A. press release, 1 p. (Accessed June 23, 2011, at http://www.vale.com/en-us/investidores/press-releases/pages/vale-adquire-simandou.aspx.)
Vale S.A., 2011, 2010 annual report: Rio de Janeiro, Brazil, Vale S.A., 228 p.

TABLE 1
GUINEA: PRODUCTION OF MINERAL COMMODITIES[1]

(Thousand metric tons unless otherwise specified)

Commodity[2]		2006	2007	2008	2009	2010
Alumina		530	527	593	530	597
Bauxite:						
Mine production:						
Wet basis[3]		18,784	18,519	18,400	15,600	17,400
Dry basis[4]		16,300	16,100	16,000	13,600	15,100
Shipments (dry basis), metallurgical		NA	NA	13,700	13,600	13,700 e
Cement		151 r, 5	299 r, 5	381 r, 5	298 r, 5	237 5
Diamond[6, 7]	thousand carats	474	1,019	3,098	697	374
Gold, mine output, Au content	kilograms	16,922 7	15,628 7	19,945 8	18,091 8	15,217 8
Salt		15	15	15	15	15 e

eEstimated data are rounded to no more than three significant digits. rRevised. NA not available.

[1]Table includes data available through August 25, 2011.

[2]In addition to the commodities listed, Guinea produced modest quantities of crude construction materials (clays, sand and gravel, and stone), but information is inadequate to make reliable estimates of output.

[3]Metallurgical ore estimated to be 13% water.

[4]Data are for wet-basis ore estimated to be 13% water reduced to dry basis estimated to be 7% water.

[5]Reported figure by Banque Centrale, Ministères du Plan, de l'Économie et des Finances.

[6]Production is approximately 70% to 80% gem quality.

[7]Includes artisanal production.

[8]Does not include artisanal mining production, which has historically ranged between 1,500 and 5,000 kilograms per year.

TABLE 2
GUINEA: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina		Alumina Company of Guinea (ACG) (United Company RUSAL, 100%)	Friguia plant, Fria	700,000
Bauxite		Compagnie des Bauxites de Guinée (CBG) [Government, 49%, and Halco Mining Inc., 51% (Halco Mining was a consortium formed by Alcoa Inc., 45%; Alcan Inc., 45%; and Dadco Group, 10%)]	Kamsar and Sangaredi	14,000,000
Do.		Compagnie des Bauxites de Kindia (CBK) (United Company RUSAL, 100%)	Debele Mine, Kindia	3,200,000
Do.		Alumina Company of Guinea (United Company RUSAL, 100%)	Friguia Mine, Fria	2,100,000
Cement		Ciments de Guinée (Holcim Ltd., 60%, and Government, 40%)	Conakry grinding plant, 35 kilometers from Conakry Port	600,000
Diamond	carats	Association pour la Recherche et l'Explotation du Diamant et de l'Or (Batax Bouna International Mining Corp.)	Aredor Mine	38,000
Do.	do.	Artisanal miners	Mainly in Banankoro	NA
Gold	kilograms	Société Ashanti de Guinée (AngloGold Ashanti Ltd., 85%, and Government, 15%)	Siguiri Mine	10,300
Do.	do.	Société Minière de Dinguiraye (OAO Severstal Resources, 85%, and Government, 15%)	Lero-Karta Mine, 700 kilometers northeast of Conakry	3,500
Do.	do.	Semafo Guinée S.A. (Semafo Inc., 85%, and Government, 15%)	Kiniero Mine, 650 kilometers east of Conakry	1,250

Do., do. Ditto. NA Not available.