USGS
science for a changing world

2007 Minerals Yearbook

GUINEA [ADVANCE RELEASE]

U.S. Department of the Interior
U.S. Geological Survey

December 2008

The Mineral Industry of Guinea

By Omayra Bermúdez-Lugo

Guinea was among the world's leading producers of bauxite. The bauxite and alumina sector generated more than 60% of the country's exports and at least 20% of its tax revenues (International Monetary Fund, 2008, p. 4). Other mineral commodities produced in the country included cement, diamond, gold, and salt. Undeveloped mineral resources included graphite, iron ore, limestone, manganese, nickel, and uranium. The Ministère des Mines, de la Géologie et de l'Environnement 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 Mining Code established the Centre de Promotion et de Developpement Miniers to deal with all aspects of investment in the mining sector.

In late February and early March 2006, Guinea's main labor union alliance had launched a historic general strike demanding wage increases and union participation in Guinea's economic and social policy. In June 2006, a second strike was launched reportedly owing to the Government's inability to control Guinea's rising inflation. A third strike was called by Guinea's main trade unions in January 2007, this time to protest about the country's poor economic conditions and to demand the resignation of the country's President. The 2007 strike brought business to a standstill and forced most bauxite and alumina operations to close temporarily. Revenue losses from halted bauxite exports were estimated to be more than $1 million per day. OAO Russian Aluminium, which managed the bauxite operations of Compagnie des Bauxites de Kindia (CBK), reportedly, had to provide military escort for company staff buses to and from work during the strike. The strike ended on January 27, 2007; bauxite and alumina operations resumed shortly thereafter. At least 60 people reportedly died during the demonstrations (Economist, The, 2007; Mining Journal 2007a-c; Reuters, 2007b).

A new Prime Minister was appointed in February 2007. Following his appointment, the Government announced the implementation of a new economic program designed to reinstate fiscal control, stabilize the economy, improve governance, and launch a program of structural reforms. Among the tasks the Government planned to accomplish between July 2007 and June 2010 was a review of the Mining Code and mining contracts, particularly with regard to the taxation policy for mining activities, which was to be reviewed and amended by the International Monetary Fund and the World Bank (International Monetary Fund, 2007, p. 4, 6, 8, 16).

Among the contracts under review were a production-sharing agreement with Hyperdynamics Corp. of Houston, Texas, and an annex of an agreement signed with United Company Rusal (RUSAL) for its operations in Kindia. Hyperdynamics had been granted the right to explore one-third of Guinea's entire offshore acreage, and the Government stated that this arrangement did not conform with international norms. The objection to the agreement with RUSAL was centered on the terms of the company's mining of the Kindia bauxite deposits and its use of the railway and port infrastructure. RUSAL was a new company formed in March 2007 by the merger of OAO Russian Aluminum, 66%; OAO Sual Holdings of Russia, 22%; and Glencore International AG of Switzerland, 12%. RUSAL owned and managed the mining operations of Alumina Company of Guinea (ACG) and CBK (Reuters, 2007c).

Production

In 2007, bauxite production decreased slightly by about 1.4% to 18.5 million metric tons (Mt) from a revised 18.8 Mt in 2006; gold production also decreased to 15,465 kilograms (kg) in 2007 from a revised 16,922 kg in 2006. Diamond production, however, increased to 1,019 thousand carats in 2007 from 474 thousand carats in 2006 (Kimberley Process Rough Diamond Statistics, 2008). Data on mineral production are provided in table 1.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Bauxite and Alumina.—In 2007, RUSAL's operations were interrupted briefly during the country's February strike and were resumed later in the month. Exports from Compagnie des Bauxites de Guinée (CBG) were also interrupted during the same period and later resumed on February 19. CBG was a joint venture between the Government (49%) and Halco Mining Inc. (51%). RUSAL also held interest in the Dian-Dian bauxite concession under which the company was to develop a bauxite and alumina mining complex, which would produce about 13.4 million metric tons per year (Mt/yr) of bauxite ore and 2.8 Mt/yr of alumina (United Company RUSAL, 2007a, b).

In February 2007, Canadian-based Navasota Resources Ltd. signed an option agreement with La Société AMIG Mining International S.A.R.L. to earn up to a 100% interest in the company's bauxite exploration license, which comprised two contiguous areas located in the prefectures of Gaoual and Telemele in northwestern Guinea. RSG Global Consulting of Australia managed the exploration program during 2007. An air-core drill testing of the bauxite plateaus was performed at the prospects, and further extension of the bauxite plateaus was confirmed (Mining Review Africa, 2007; Navasota Resources Ltd., 2007).

In May, Toronto-based Global Alumina Corporation Ltd. (GAC) completed a joint-venture agreement with BHP Billiton plc (a dual-listed company with head offices in Australia and the United Kingdom), Dubai Aluminium Company Ltd. (DUBAL), and Mubadala Development Company PJSC (Mubadala) for the development of the Boke alumina refinery. The refinery was expected to be completed by 2010 and full production to begin in 2011 at a cost of $3 billion. The design capacity of the plant was increased to 3 Mt/yr in March from the 2.8 Mt/yr announced in 2006; upon completion, the plant would be the world's leading greenfield alumina refinery. BHP would hold a 33% interest in the project and DUBAL and Mubadala would hold a 25% and an 8.33% interest, respectively; GAC would hold the remaining interest. The project was at the feasibility stage during 2007. In October, GAC announced that it was in discussions with a third party (name not disclosed) concerning the possible sale of the company; in November, GAC entered into an exclusive and confidential agreement with a prospective buyer and a comprehensive due-diligence process began with the cooperation of the Boke refinery joint-venture partners (Global Alumina Corporation Ltd., 2007a, b; Mining Journal, 2007e).

Copper and Nickel.—Canadian company Mega Uranium Ltd.'s proposed 9-hole 5,000-meter drilling program for the Kakoulima copper-nickel polymetallic deposit was suspended in late February 2007 owing to political instability and civil unrest in the country as a result of the strike. The company had planned to resume operations later in the year after the rainy season; however, Mega Uranium had made no announcements concerning the resumption of drilling or the progress of the project as of yearend 2007 (Mega Uranium Ltd., 2008).

Gold.—On November 8, 2007, Cassidy Gold Corp. announced a new resource estimate for its 100% owned Kouroussa gold project. Indicated resource estimates increased to about 6.7 Mt at a grade of 2.2 grams per metric ton (g/t) gold from the 4.38 Mt at a grade of 2.4 g/t that was reported in 2005; inferred resource estimates increased to about 8.8 Mt at a grade of 1.7 g/t gold from the 5.8 Mt at a grade of 1.97 g/t that was reported in 2005. Cassidy planned to continue with its exploration activities in 2008 and, for this purpose, hired Spectrem Air Ltd. to complete an airborne electromagnetic survey of all its Kouroussa concessions (Cassidy Gold Corp., 2007a, b).

In 2007, the Kiniero Mine produced 843 kilograms (kg) of gold (reported as 27,100 troy ounces) compared with 1,468 kg of gold (reported as 47,200 troy ounces) in 2006. The decrease in production was attributable to lower grade ore (Semafo Inc., 2008, p. 7).

Gold production from the Siguiri Mine was 10,264 kg (reported as 330,000 troy ounces) compared with 9,362 kg (reported as 301,000 troy ounces) in 2006. All ore and waste was mined by a mining contractor and the ore was processed using carbon-in-pulp (CIP) and heap-leach processes. The two types of gold deposits mined at the Siguiri Mine were laterite and in situ quartz-vein-related mineralizations (AngloGold Ashanti Ltd., 2008, p. 86).

London-based Crew Gold Corp. announced in February the first gold pour at its Lefa gold mine since the commissioning of its new 7-Mt/yr carbon-in-pulp plant. The company processed about 172,000 t of lower grade stockpiled ore containing 1.15 g/t gold at an estimated recovery rate of 95%. In October, the company announced that mine operations were curtailed owing to interruptions in the delivery of diesel caused by flooding and poor road conditions between Conakry and the Lefa Mine as a result of higher than expected precipitation during the rainy season. Scheduled maintenance was carried out during the slowdown in operations. On October 25, the company announced that, as a result of drilling at the Firifirini area and of a midyear design review of the main Lefa Corridor deposits, reserves at the Lefa project had increased to about 120,400 kg (reported as 3.87 million troy ounces) from about 105,100 kg (reported as 3.38 million troy ounces) (Crew Gold Corp., 2007a, b).

Burey Gold Ltd., through its subsidiary Burey Gold Guinée SARL, established a registered office in Conakry and a field base camp in the village of Balan to undertake exploration activities at the Mansounia gold project. The company announced that exploration drilling undertaken during 2006 and 2007 had confirmed the existence of gold mineralization at Mansounia; a drilling program was set to continue into 2008 (Burey Gold Ltd., 2008, p. 3-5).

Iron Ore.—London-based Rio Tinto plc continued to work on its prefeasibility study for the Simandou iron ore project in southeastern Guinea, which was scheduled to be completed by 2010. The prefeasibility study included the construction of an iron ore mine, a 7-kilometer (km)-long rail system, and a deepwater port south of Conakry. The company envisioned operations to begin by 2013 at a production rate of about 70 Mt/yr of iron ore. Once the project is up and running the Government would have the right to earn a 20% interest in the project (Metal Bulletin, 2007; Mining Journal, 2007d). The International Finance Corp. (IFC) approved an additional $30 million investment to maintain the 5% interest it acquired in the project in 2006. The IFC planned to continue to fund exploration and feasibility studies for the project (International Finance Corporation, 2007).

Industrial Minerals

Diamond.—West African Diamonds plc (WAD) (formerly African Diamonds plc; WAD was demerged and listed separately from African Diamonds plc in January 2007) continued to conduct exploration work at the Bomboko alluvial diamond deposit. In November, the company announced the recovery of four large diamonds ranging from 3.8 carats to 9.2 carats at the property as a result of bulk sampling. The Bomboko alluvials lie within the headwaters of the Bomboko River north of the watershed that divides the northeasterly flowing Niger tributaries and the southwesterly flowing rivers that drain into the Atlantic Ocean. Resources at Bomboko were estimated to be 750,000 carats. WAD also held a prospecting license for the Droujba property, which includes the diamond-bearing kimberlites and associated secondary diamond deposits around the Bounoudou area in southeast Guinea. The company planned to continue with its exploration activities in the area in 2008, which would include a ground geophysical survey (West African Diamonds 2007a; 2007b, p. 4, 6-7, 9-10).

In June, Canada-based Mano River Resources Inc. and SearchGold Resources Inc. announced the creation of Stellar Diamonds Ltd. to take over 100% of Mano River's Guinea, Liberia, and Sierra Leone interests, and 50% of SearchGold's interest in Guinean Diamond Corporation Ltd., which held the Bouro/Mandala alluvial project. Stellar also signed an agreement with South Africa-based De Beers Group to access their regional Guinea database (SearchGold Resources Inc., 2007).

Mineral Fuels

Petroleum.—Guinea did not produce or refine petroleum and was dependent upon imports for its petroleum requirements. Hyperdynamics continued to explore for petroleum offshore Guinea. On August 22, 2007, the company announced the details of its 2007 work program, which included the acquisition and analysis of aeromagnetic and gravity survey data; the study of additional two-dimensional (2-D) seismic survey data; and the acquisition and analysis of onshore oil seeps. The company also acquired about 5,000 km of proprietary 2-D seismic data from previous exploration programs that took place in 2002 and 2003. The 2007 program was aimed at identifying and confirming hydrocarbon plays and leads with the ultimate goal of defining drillable prospects (U.S. Securities and Exchange Commission, 2007). Hyperdynamics' offshore exploration contract was under review by the Government.

Uranium.—Australia-based Murchison United NL continued to develop its portfolio of uranium exploration projects in Guinea. The company announced the completion of a 2,050-meter reverse-circulation drilling program for the Firawa prospect in June 2007 and subsequently announced assay results for the prospect in September 2007. These results confirmed uranium mineralization over a prospective 2-km section of a previously identified 5-km uranium anomaly. The company planned to conduct an additional 20,000-meter diamond-drilling program for the Firawa prospect in early 2008, to begin a drilling program for the Bohoduo prospect, and to establish an office in Kissidougou from which its exploration programs would be managed (Murchison United NL, 2007a-c). Following Murchison's announcements, the Government announced that it would start talks with the International Atomic Energy Agency regarding a nuclear program in an attempt to seek a nuclear solution to the country's electricity shortages (Reuters, 2007a).

Perth-based Nova Energy Ltd., which in 2006 held two exploration licenses in northern Guinea, was acquired by Australian-based Toro Energy Ltd. in August 2007. The merger of these two companies was underway during the fourth quarter of 2007 and no announcements concerning the progress of its Guinea uranium interests were made as of yearend (Toro Energy Ltd., 2007).

Outlook

Guinea's economy is likely to benefit from expansions in the bauxite sector and from new mining developments scheduled to take place between 2009 and 2012, in addition to investments in infrastructure over the next 5 to 8 years. The Government estimated that such development projects could bring in about $27 billion in investments to the country beginning in 2008.

References Cited

AngloGold Ashanti Ltd., 2008, 2007 annual report: Johannesburg, South Africa, AngloGold Ashanti Ltd., 326 p.

Burey Gold Ltd., 2008, 2007 annual report: Balcatta, Western Australia, Burey Gold Ltd., 49 p.

Cassidy Gold Corp., 2007a, Drilling resumes at Cassidy Gold's Kouroussa project: Kamloops, British Coulmbia, Canada, Cassidy Gold Corp. press release, December 4, 2 p.

Cassidy Gold Corp., 2007b, Indicated resources increase 38% at Cassidy Gold's Kouroussa project: Kamloops, British Columbia, Canada, Cassidy Gold Corp. press release, November 8, 3 p.

Crew Gold Corp., 2007a, First gold pour from Lefa expansion project: London, United Kingdom, Crew Gold Corp. press release, February 5, 2 p.

Crew Gold Corp., 2007b, Lefa operation—Mid-year reserve increase: London, United Kingdom, Crew Gold Corp. press release, October 25, 2 p.

Economist, The, 2007, Guinea—Blood and diamonds: The Economist, January 27, p. 48.

Global Alumina Corporation Ltd., 2007a, Global Alumina completes joint-venture agreements: Toronto, Ontario, Canada, Global Alumina Corporation Ltd. press release, May 21, 3 p.

Global Alumina Corporation Ltd., 2007b, Global Alumina releases third quarter 2007 results: Toronto, Ontario, Canada, Global Alumina Corporation Ltd. press release, November 14, 4 p.

International Finance Corp., 2007, IFC increases investment in Guinean iron ore project to support sustainable mine development and local economic benefits: Washington, DC, International Finance Corp. press release, September 24, 2 p.

International Monetary Fund, 2007, Guinea—Letter of intent, memorandum of economic and financial policies, and technical memorandum of understanding: Washington, DC, International Monetary Fund, December 4, 30 p.

International Monetary Fund, 2008, Guinea—Selected issues and statistical appendix: Washington, DC, International Monetary Fund, January, 46 p.

Kimberley Process Rough Diamond Statistics, 2008, Annual summary tables, Kimberley Process Rough Diamond Statistics annual summary tables. (Accessed September 18, 2008, at https://mmsd.mms.nrcan.gc.ca/kimberleystats/publicstats.asp.)

Mega Uranium Ltd., 2008, Mount Kakoulima: Mega Uranium Ltd. (Accessed October 16, 2008, at http://www.megauranium.com/main/index.php?mountkakoulima-po.)

Metal Bulletin, 2007, Rio Tinto's Simandou iron ore: Metal Bulletin, June 18, no. 9, p. 30.

Mining Journal, 2007a, Guinea strike ends: London, United Kingdom, Mining Journal, February 2, p. 3.

Mining Journal, 2007b, Guinea strike escalates: London, United Kingdom, Mining Journal, January 19, p. 3.

Mining Journal, 2007c, Guinea strike escalates: London, United Kingdom, Mining Journal, January 26, p. 1.

Mining Journal, 2007d, Simandou decision: London, United Kingdom, Mining Journal, February 9, p. 12.

Mining Journal, 2007e, Boké costs rise amid delay: London, United Kingdom, Mining Journal, April 27, p. 8.

Mining Review Africa, 2007, New bauxite project in Guinea, Mining Review Africa, no. 3, p. 5.

Murchison United NL, 2007a, Further significant uranium intersections from Firawa prospect—Guinea, West Africa: West Perth, Australia, Murchison United NL press release, June, 7 p.

Murchison United NL, 2007b, Quarterly report: West Perth, Australia, Murchison United NL, June, 11 p.

Murchison United NL, 2007c, Quarterly report: West Perth, Australia, Murchison United NL, September, 13 p.

Navasota Resources Ltd., 2007, Drilling resumes at Navasota's Koba bauxite project—Guinea: Toronto, Ontario, Canada, Navasota Resources Ltd. press release, November 29, 2 p.

Reuters, 2007a, Guinea joins African states seeking nuclear power: London, United Kingdom, August 23. (Accessed January 4, 2008, at http://uk.reuters.com/article/idUKL2369937420070823.)

Reuters, 2007b, Guinea strike talks continue as death toll rises: London, United Kingdom, Reuters, January 26. (Accessed January 8, 2008, at http://uk.reuters.com/article/latestCrisis/idUKL2680697320070126.)

Reuters, 2007c, Update 2-Guinea withdraws oil/bauxite deals for review: London, United Kingdom, Reuters, April 15. (Accessed January 16, 2008, at http://www.reuters.com/article/companyNewsAndPR/idUSN1521521620070415.)
SearchGold Resources Inc., 2007, SearchGold reorganizes diamond assets and obtains a 11.8% stake in Stellar Diamonds Limited: Montreal, Quebec, Canada, SearchGold Resources Inc. press release, June 20, 3 p.
Semafo Inc., 2008, 2007 annual report: Saint-Laurent, Quebec, Canada, Semafo Inc., 16 p.
Toro Energy Ltd., 2007, Report for the quarter ending 30 September 2007: South Australia, Toro Energy Ltd., 13 p.
United Company RUSAL, 2007a, Dian-Dian bauxite and alumina complex: United Company RUSAL. (Accessed January 16, 2008, at http://www.rusal.com/index.php?lang=eng&topic=5&subtopic=206.)
United Company RUSAL, 2007b, FAQS: United Company RUSAL. (Accessed January 16, 2008, at http://www.rusal.com/index.php?lang=eng&topic=4&subtopic=59&subtopic2=69.)
U.S. Securities and Exchange Commission, 2007, Hyperdynamics Corporation form 10-K: Washington DC, U.S. Securities and Exchange Commission, 55 p.
West African Diamonds plc, 2007a, AGM statement: London, United Kingdom, West African Diamonds plc press release, November 29, 2 p.
West African Diamonds plc, 2007b, 2007 annual report and accounts: United Kingdom, West African Diamonds, 39 p.

TABLE 1
GUINEA: PRODUCTION OF MINERAL COMMODITIES[1]

(Thousand metric tons unless otherwise specified)

Commodity[2]		2003	2004	2005	2006	2007
Alumina:						
Production:						
Hydrate		8	10	-- r, 3	-- r, 3	-- 3
Calcined		730	877	722 r, 3	545 r, 3	542 p
Shipments, calcined		738	887	722 r, 3	529 r, 3	542 p
Bauxite:						
Mine production:						
Wet basis[4]		17,044 3	17,200	16,817 3	18,784 r, 3	18,519 p
Dry basis[5]		15,000	15,254 3	14,600	16,300 r	16,100
Shipments (dry basis):						
Metallurgical		13,939 3	14,100	14,100	NA	NA
Cement		360	360	360	360	360
Diamond[6, 7]	thousand carats	666	674 3	549 3	474 3	1,019 3
Gold	kilograms	16,622 3	11,100	25,097 3	16,922 r, 3, 7	15,465 p, 7
Salt		15	15	15	15	15

[e]Estimated data are rounded to no more than three significant digits. [p]Preliminary. [r]Revised. NA not available. -- Zero.
[1]Table includes data available through September 2008.
[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]Reported figure.
[4]Metallurgical ore plus calcinable ore estimated to be 13% water.
[5]Data are for wet-basis ore estimated to be 13% water reduced to dry basis estimated to be 3% water.
[6]Production is approximately 70% to 80% gem quality.
[7]Figures include artisanal production.

TABLE 2
GUINEA: STRUCTURE OF THE MINERAL INDUSTRY IN 2007

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina		Alumina Company of Guinea (United Company RUSAL, 100%)	Friguia plan, Fria	640,000.
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	3,000,000.
Do.		Alumina Company of Guinea (United Company RUSAL, 100%)	Friguia Mine, Fria	2,800,000.
Cement		Ciments de Guinée (Holcim Ltd., 51%, and Government, 44%)	Conakry plant	360,000.
Diamond	carats	Aredor-First City Mining Company (Government, 15%, and Trivalence Mining Corp., 85%)	Aredor Mine	38,000.
Do.	do.	Artisanal miners	Mainly in Banankoro	700,000.
Gold		Crew Gold Corp.	Lefa Mine	172,000 ore.
Do.		Société Ashanti de Guinée (Anglogold Ashanti Ltd., 85%, and Government, 15%)	Siguiri Mine	9,000,000 ore; 10,300 kilograms of gold.
Do.		Société Minière de Dinguiraye (Guinor, 85%, and Government, 15%)	Lero-Karta Mine	1,100,000 ore; 3,500 kilograms of gold.
Do.		Société d'Exploitation Minière d'Afrique de l'Ouest Guinée (Semafo Inc., 85%, and Government, 15%)	Kiniero Mine	400,000 ore; 1,700 kilograms of gold.

Do., do. Ditto.