THE MINERAL INDUSTRY OF

GUYANA

By Alfredo C. Gurmendi

Guyana, which is in northern South America and borders the North Atlantic Ocean, Brazil, Suriname, and Venezuela, had a population of more than 700,000 in a nearly 215,000-square-kilometer (km^2) area. In 1999, Guyana's gross domestic product (GDP) was $1.8 billion[1] of purchasing power parity. The annual growth of the Guyanese economy was -1.8%, which was the result of El Niño and the lower prices for its major agricultural and mineral exports in the first half of 1999. The inflation rate was 4.1% (U.S. Central Intelligence Agency, 1999, p. 5).

The legal and land title systems are based on the English common law, and all mineral rights are vested within the Government. The Guyana Geology and Mines Commission (GGMC) is responsible for managing the mining and petroleum industries according to the law and policies of the Government. GGMC promotes foreign investment and participation in mineral development in the country (Hinds, 2000a, p. 4).

Mining concessions are negotiated, via Mineral Agreements, with the following Government agencies: the Bauxite Industry Development Co. Ltd. (BIDCO) for bauxite, the GGMC for gold and diamonds, and the Guyana Natural Resources Agency for oil. Since 1982, the Guyana Gold Board (GGB) has been the sole official buyer of gold. On January 10, 1997, however, 12 private-sector individuals and companies had been licensed to purchase, store, and export gold on a trial basis for 1 year. The program was extended beyond 1998, which would indicate that the GGB will eventually be phased out in the near future (Hinds, 2000a, p. 18).

While maximizing the returns from its natural resources, Guyana also desires to minimize the social and environmental costs and biodiversity losses (Sawh, 1998). Guyana's Environmental Protection Act 1996 (Act No. 11 of 1996) and the Guyanese Environmental Protection Agency of 1997 require an environmental impact assessment (EIA) for all mining operations. A detailed EIA forms part of the mining license process. Mining companies must observe environmental guidelines, such as designing dams for tailings and ponds of retention to avoid failures because of the milling or leaching discharges, respectively. Also, mining companies must maintain air and water quality during operations, use larger and technologically advanced dredges in the Essequibo River, and protect ecosystems from emerging environmental problems, such as mercury contamination of soils and waters that results from gold recovery by individuals and small dredges. Similarly, the Government of Guyana expects that petroleum operations will be conducted with the same diligence as in the United States and other developed countries (Hinds, 2000a, p. 26).

Investment in the mining sector is guaranteed by the Government and secures tenure of property rights and titles. The Guyanese Government allows 100% foreign ownership of large-scale prospecting and mining licenses, reassignment and transfer of property rights to third parties, to occupy the land alienated under the prospecting or mining license, repatriation of profits, and the granting of prospecting and mining licenses and their renewals in accordance with the Mining Act of 1989 (Hinds, 2000a, p. 1).

Fiscal terms applicable to prospecting and mining in Guyana are grouped in three categories—large-scale development of gold, precious stones, and diamonds; large-scale development of bauxite and other minerals, except sand and stones (quarriable materials); and small- and medium-scale development of gold and diamonds reserved for Guyanese citizens. Foreign investors, however, could enter into joint-venture agreements with domestic entrepreneurs and with GGMC's approval (Sucré, 1999, p. 1; Hinds, 2000a, p. 1).

The State uses four fiscal measures to acquire revenues from the mining industry—royalties [1.5% of production or gross revenues from bauxite and other minerals (except sand and quarriable stones) and 5% for gold, precious metals, diamonds, and precious stones], corporate income tax (35% of taxable income), withholding tax (6.25% of distributed dividends), and consumption tax on fuel (10%). Equipment, process materials, and spares used for surveys, exploration, development, and mining by licensees or their contractors are duty free. All conditions are to be maintained for up to 15 years from the start of production or the life of the deposit, whichever is shorter; then the general rules for duties, income tax, and withholding tax will apply (Sucré, 1999, p. 1-2; Hinds, 2000a, p. 2).

Mining continued to play a very important role in the Guyanese economy. The main mineral commodities were bauxite, diamonds, and gold. The two largest components of the country's exports were gold (22.6%) and bauxite (14.3%), which represented about one-third of Guyana's exports. Gold exports decreased to $140 million from $144.4 million in 1998, and bauxite exports remained at the same level than that of 1998 and amounted to about $90 million (Sucré, 1999, p. 9).

Guyana was the third largest bauxite producer in Latin America after Brazil and Jamaica (Plunkert, 2000). Berbice Mining Enterprise Ltd. (Bermine) and Linden Mining Enterprise Ltd. (Linmine), which were state-owned companies, were controlled by BIDCO. Bermine and Linmine will be privatized, or "capitalized" (Government and citizen participation) in 1999 or 2000 (Brassington, 1998). The March 30, 1999, bid submission deadline was established by the Executive Secretary and Head of the Privatization Unit of the Ministry of Finance. The proposed ownership could be as follows: investor (consortia), 60%; Government, 25%;

[1]Where necessary, values have been converted from Guyanese dollars (G$) to U.S. dollars at the rate of G$175.00=US$1.00.

employees, 10%; private (domestic), 5% (Industrial Minerals, 1998).

Other BIDCO holdings included a 50% share in Guybulk Shipping Ltd., a joint venture with Klaveness Corp., a Norwegian shipping company, and Bidco America Ltd., a wholly owned subsidiary that handled bauxite sales in the United States. Aroaima Bauxite Co., another active mining company, was a joint venture of Reynolds Metals Co. of the United States and the Guyanese Government.

Hardman Resources NL (40%) of Australia entered into a joint-venture oil project with TM Services Limited of the United Kingdom (60%) to explore the Takutu Basin, which is located onshore in western Guyana and covers 11,200 km^2. The licensing process was in progress (Hardman Resources NL, May 7, 1998, Guyana—South America, Chairman's Report May 1998, accessed May 12, 1998, at URL http://www.ozemail.com.au/~hardburn/hardman.htm).

In 1999, bauxite production amounted to about 3.3 million metric tons (Mt) of which 75% was produced by Aroaima, or about 2% of the world's bauxite production. Bermine and Linmine produced 200,000 metric tons (t) each. Bermine produced mainly metal-grade and chemical-grade bauxite, and Linmine produced calcinated refractory-grade bauxite. Aroaima and Bermine produced 100,000 and 150,000 metric tons per year, respectively, of chemical-grade bauxite (Industrial Minerals, 1998; Hinds, 2000b, p. 9; Plunkert, 2000, p. 33).

Gold production in 1999 increased slightly to 13.1 t from almost 13 t in 1998. The Omai Mine, which was the third largest gold producer (after the Pierina and the Yanacocha Mines in Peru) and one of the largest open pit gold mines in Latin America, was owned by Omai Gold Mines Ltd. (OGML). The Omai Mine poured its one-millionth ounce of gold in mid-1997. Omai's gold production similarly decreased to 9.6 t from 10.2 t in 1998 (Golden Star Resources Ltd. 1999, p. 7; Sucré, 1999, p. 12). A small amount of silver, equivalent to approximately 5% of gold output, was recovered during refining of the gold. Recorded production of diamonds amounted to 50,000 carats in 1999 (Hinds, 2000b, p. 9) (table 1).

Several international companies were involved in the Guyanese mining industry (table 2). Canada-based Cambior Inc. (65%) and Denver-based Golden Star Resources Ltd. (GSRL) (30%) owned a joint 95% interest, and the Guyanese Government held a 5% interest in OGML (Golden Star Resources Ltd., 1999, p. 7). OGML accounted for about 20% of Guyana's GDP and 18% of its exports. As of December 31, 1999, at a gold price of $325 per ounce, Cambior estimated that proven and probable ore reserves for Omai were 36.7 Mt grading 1.3 grams per metric ton (g/t) containing 49.5 t (1.59 million ounces) of gold (Golden Star Resources Ltd., 1998, p. 4).

Other participants exploring, in order of importance, for gold and diamonds in Guyana were BHP Corp. of Australia and International Roraima Gold Corp., Placer Dome Inc., Seahawk Minerals Ltd., and Toscana Resources Ltd., all of Canada. BHP was interested in finding mineral deposits similar to the Carajás iron ore mine in Brazil and low-cost gold producers similar to Peru's Pierina and Yanacocha gold mines. GSRL was interested in finding deposits similar to Omai and the Five Stars-type gold and diamond prospects in the Guiana Shield of South America.

Exxon Corp. of the United States, European joint venture lead by Royal Dutch-Shell Group of the Netherlands and the United Kingdom and Total of France, and CGX Energy Inc. of Canada are interested in exploring for gas and oil in the country. CGH Energy Inc. held a 100% interest in a 15,464-km^2-area exploration license in Guyana (CGX Energy Inc., Written commun., April 10, 2000).

As a result of low gold prices ($272.50 and $259 per ounce as of May 19 and the last quarter of 1999, respectively), exploration programs will continue to be reduced, particularly on the Guiana Shield (northern Brazil, French Guiana, Guyana, Suriname, and southeastern Venezuela). Since the first quarter of 1999, GSRL has reduced exploration activities in Guyana, except on its high-priority Eagle Mountain prospect, where the company calculated a resource of 4 Mt grading 1.4 g/t gold (MacLean, 1998; Mining Journal, 1999). The project could supply mill feed to the Omai mill, which is 50 kilometers southwest of the discovery.

Baracara Quarries and Toolsie Persaud Ltd. produced gravel near Bartica. The Government's Teperu-Itabu Quarry reopened in response to the overwhelming demand for construction materials, and consideration was given to using waste rock from the Omai gold mine for aggregate and boulders.

Guyana has diversified the formerly bauxite-oriented mineral industry by means of its 8-year gold and diamond (in order of importance) promotion programs. Because much of Guyana has yet to be studied and explored in a systematic way, significant economic deposits of nonferrous metals and petroleum have yet to be discovered (Hinds, 2000a, p. 28). Foreign participation and internationally funded exploration activity have resulted in augmented gold production, which is considered to be sustainable into the next decade. Large-scale gold operations would significantly strengthen Guyana's economy, such as those at the Omai Mine.

References Cited

Brassington, L.R., 1998, Guyana—Ambitious privatization agenda: Washington Times, A Special International Report, May 27, p. 4.

Golden Star Resources Ltd., 1998, Golden Star Resources announces restated reserves and mineralized inventory and a year-end financial update: Golden Star Resources Ltd. press release, February 13, 4 p.

———1999, Transformation from exploration to production: Golden Star Resources Ltd. Annual Report, December 31, 1999, 104 p.

Hinds, S.A., 2000a, Guyana—Government's policy for exploration and development of minerals and petroleum resources of Guyana: Annual Investing in the Americas Conference, 9th, Miami, Florida, April 10-11, 29 p.

———2000b, Guyana—International mines show interest through massive investments in exploration and mining: A Special International Report Prepared by The Washington Times, Washington, DC, June 30, 12 p.

Industrial Minerals, 1998, Guyana—Privatization of the bauxite industry in Guyana: Industrial Minerals, no. 375, December, p 12.

MacLean, Don, 1998, Mining exploration—The Eagle Mountain project in Guyana: Nesbitt Burns Research Report, First Quarter, p. 1.

Mining Journal, 1999, Gold hits 20-year low: Mining Journal, v. 332, no. 8833, May 21, p. 325.

Plunkert, P.A., 2000, Bauxite and alumina: U.S. Geological Survey Mineral Commodity Summaries, 2000, p. 32-33.

Sawh, Satyadeow, 1998, Guyana—Achieving a balance between sustainable development and forest exploitation: Washington Times, A Special International Report, May 27, p. 4.

Sucré, B.L, 1999, Guyana—The mining fiscal regime: Annual Investing in the Americas, 8th, Miami, Florida, March 29-April 1, 1999, 15 p.

U.S. Central Intelligence Agency, 1999, Guyana—Economy, The world factbook: U.S. Central Intelligence Agency, p. 181-183.

Major Sources of Information

Bank of Guyana (Central Bank)
1 Avenue of the Republic
Georgetown, Guyana
Telephone: (592) 2-63261
Fax: (592) 2-72965
Bauxite Industry Development Co. Ltd. (BIDCO)
71 Main Street
Georgetown, Guyana
Telephone: (592) 2-57780
Georgetown Chamber of Commerce
157 Waterloo Street
Georgetown, Guyana
Telephone: (592) 2-55846
Fax: (592) 2-63519
Guyana Geology and Mines Commission
P.O. Box 1028
68 Upper Brickdam
Georgetown, Guyana
Telephone: (592) 2-52865
Fax: (592) 2-53047
Guyana Gold and Diamond Miners Association
350 A New Market Street
North Cummingsburg
Georgetown, Guyana
Telephone: (592) 2-52217
Fax: (592) 2-51828
Guyana Gold Board
c/o Guyana Geology and Mines Commission Compound
68 Upper Brickdam
Georgetown, Guyana
Telephone: (592) 2-53173
Guyana Natural Resources Agency
41 Brickdam and Boyle Place—Stabroek
Georgetown, Guyana
Telephone: (592) 2-66549
Fax: (592) 2-71211

Major Publications

Guyana Geology and Mines Commission: Mineral Resources of Guyana, 1997, 29 p.
Industrial Minerals, 16 Lower Marsh, London SE1A7RJ, Great Britain: Metal Bulletin plc, monthly.
International Bauxite Association: IBA Quarterly Review, quarterly.
The Mining Journal Limited, 60 Worship Street, London EC2A2HD, Great Britain: Mining Journal, weekly.
U.S. Department of Commerce, International Trade Administration: Foreign Economic Trends and Their Implications for the United States, Guyana, annual.

TABLE 1
GUYANA: PRODUCTION OF MINERAL COMMODITIES 1/

Commodity 2/		1995	1996	1997	1998	1999
Aluminum, bauxite, dry equivalent, gross weight	thousand metric tons	2,028	2,475	2,467	2,600 e/	3,300 3/
Diamond	carats	52,014	49,000	35,612	50,000 r/	50,000
Gold, refined 3/	kilograms	9,005	12,006	15,033 r/	12,960 r/	13,063
Stone, crushed e/	metric tons	136,000	136,000	136,000	136,000	136,000

e/ Estimated. r/ Revised.
1/ Includes data available through May 2000.
2/ In addition to the commodities listed, a variety of crude construction materials (clays and sand) and semiprecious stones was also produced. Available information was inadequate to make an estimate of production.
3/ Reported by Guyana Geology & Mines Commission.

Source: Bureau of Statistics & State Planning Secretariat.

TABLE 2
GUYANA: STRUCTURE OF THE MINERAL INDUSTRY IN 1999

(Thousand metric tons, unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Bauxite and alumina:			
Bauxite	Bauxite Industry Development Co. Ltd. (BIDCO) (Government, 100%)	Kara Kara, Northeast Dorabece, and East Montgomery Mines, MacKenzie, Linden, West Demerara District	3,500
Do.	do.	Block 2 Manaka, North, South mines. Kwakwani, East Berbice District	1,500
Do.	do.	Processing plant at Linden	900
Do.	do.	Processing plant at Everton, East Berbice District	700
Do.	C.A. Dayco (private, Venezuela, 100%) (BIDCO contract)	Kwakani area	500
Do.	Green Mining Inc. (Green Construction Co., United States, 100%) (Guymine contract)	Dacouria Mine, Linden	NA
Do.	Aroaima Bauxite Co. (Government, 50%; Reynolds Metals Co., United States, 50%)	Aroaima, East Berbice District	1,500
Alumina	BIDCO	Alumina refinery at Linden (presently closed)	300
Gold kilograms	Omai Gold Mines Ltd. (Cambior Inc., Canada, 65%; Golden Star Resources Ltd., United States, 30%; Government of Guyana, 5%)	Omai Mine, Mazaruni-Potaro District	300
Gravel	Baracara Quarries (private)	Quarry near Bartica, Mazaruni-Potaro District	100
Silica sand	Minerals and Technology Ltd. (Minerals and Chemicals of Texas, United States)	Sand Hills, Demerara River, West Demerara District	300

NA Not available.