

THE MINERAL INDUSTRY OF GUYANA

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Guyana has a population of about 800,000 in a 215,000 square kilometers (km²) area. Guyana's gross domestic product (GDP) was \$1.4 billion¹ in 1996, which represented an annual growth of 6%. The inflation rate was 8%. The country gained independence from the United Kingdom in 1966 and both the legal and land title systems are based on the English common law. All mineral rights are vested within the State; mining concessions are negotiated with Government agencies. They are the Bauxite Industry Development Co. Ltd. (BIDCO) for bauxite, the Guyana Geology and Mines Commission (GGMC) for gold and diamonds, and the Guyana Natural Resources Agency for oil. The Guyana Gold Board (GGB), established in 1982, has been the sole official buyer of gold.

The Government uses four fiscal measures to acquire revenues from the mining industry, mainly: royalties (5%), corporate income tax (35%), withholding taxes on repatriated profits (15%), and participating in state-owned joint ventures. A reduction of the above rates is under consideration.

Mining plays a very important role in the Guyanese economy; the main mineral commodities are bauxite, diamonds, and gold. The two largest components of its mineral exports are gold (\$120 million) and bauxite (\$40 million), which represent about one-third of all its exports.

Guyana is the fourth largest bauxite producer in Latin America after Brazil, Jamaica, and Suriname. The state-owned companies Linden Mining Enterprise Ltd. (Linmine) and Berbice Mining Enterprise Ltd. (Bermine) are controlled by the BIDCO. Other BIDCO holdings include a 50% share in Guybulk Shipping Ltd., a joint venture with the Norwegian shipping company Klavness Corp., and Bidco America Ltd., a wholly owned subsidiary that handles bauxite sales in the United States. A third mining company, Aroaima Bauxite Co. (Aroaima), is a joint venture between Reynolds Metals Co. of the United States and the Guyanese Government.

In 1996, bauxite production amounted to about 2 million metric tons (Mt) of which 75% was produced by Aroaima, or about 2% of the world's bauxite production. Linmine and Bermine produced 200,000 metric tons (t) each. Linmine produces calcinated refractory-grade bauxite and Bermine produces mainly metal-grade and chemical-grade bauxite. Total bauxite reserves are estimated to be 1.2 billion tons, enough to produce all grades of bauxite (Mining Journal, 1996a).

Gold production in 1995 fell to 9.3 t because of the 20

weeks' lost output at the Omai Mine, following a failure in the main section of the tailings dam in August 1995. Production increased to 12.4 t after the resumption of operations, which was approved by the Guyanese Government (Mining Journal, 1996b; Cambior Inc., 1996), at Omai on February 4, 1996. Gold output is expected to continue at that rate into the next decade. A small amount of silver, equivalent to approximately 5% of gold output, was recovered during refining of the gold. Recorded production of diamonds exceeded 50,000 carats in 1996. (See table 1.)

The Canadian firm Cambior Inc. owns 65% of Omai Gold Mines Ltd. (OGML), Golden Star Resources Ltd. (GSRL) of the United States holds a 30% interest, and the Guyana Government holds a 5% interest (The Northern Miner, 1996). The completion of OGML's mill expansion in early 1996, at a capital cost of \$58 million, increased milling capacity from 12,000 metric tons per day (t/d) to about 20,000 t/d. OGML accounted for about 20% of Guyana's GDP and 25% of its exports. Omai's current gold reserves are about 69 Mt grading 1.5 grams per metric ton, representing some 103 t of contained gold (Mining Journal, 1996c). Gold production for 1997 is projected at near 10 t and sustained at about 9.3 metric tons per year into the next decade.

Current exploration programs are carried out by foreign companies interested in the gold and diamond potential of the Guiana Shield, which forms part of northern Brazil, French Guiana, Guyana, Suriname, and southeastern Venezuela. Thus, investment in exploration for gold and diamonds increased steadily in the region. Active participants, in Guyana, are BHP Corp. (BHP) of Australia; Toscana Resources Ltd., International Roraima Gold Corp., and Placer Dome Inc. all of Canada; and GSRL. In August 1996, BHP announced an agreement with the Guyanese Government for exploring 13,000 km² in the northern half of Guyana (The Golden Star Group, 1996). BHP (60%) and GSRL (40%) entered in a joint-venture agreement for the exploration of the areas. Under the joint-venture, GSRL will manage the exploration programs. BHP's main interests, in the exploration areas, are the potential for world class gold and iron ore deposits; and GSRL's interests are Omai type gold deposits and diamonds.

The Government continued to seek private investment for exploitation of mineral deposits. The Mining Act of 1989 limited small- and medium-scale mining to Guyanese citizens only, which led immediately to problems of definition of size. Foreigners were restricted to large-scale mining, except in the case where a claim operator specifically requested foreign technical assistance and the GGMC supported the work permit

¹Where necessary, values have been converted from Guyanese dollars (G\$) to U.S. dollars at the rate of G\$142.7=US\$1.00.

application. Although joint ventures between local and foreign companies are encouraged, 100% foreign ownership of Guyanese operations is currently allowed. The Government has begun to restructure Linmine for privatization.

The Guyanese Government has decided to create an Environmental Protection Agency (EPA). The legislation creating EPA will require an environmental impact assessment (EIA) for all mining operations. EIAs will require that mining companies observe environmental guidelines, such as in designing tailing dams and ponds to prevent milling or leaching discharges, maintaining air and water quality during operations, using large dredges in the Essequibo River, and protecting emerging environmental problems including mercury contamination of soils and waters resulting from gold recovery by individuals as well as small dredges.

Traditionally, independent gold miners had smuggled much of their recovered gold into Brazil or Venezuela. It is expected that GGB's monopoly status will be replaced with a system of licensed and bonded gold buyers, and independent and/or small-scale gold miners will be encouraged to constitute cooperatives that may qualify as licensed buyers, who will then be responsible for paying royalties to the Government. The royalty rate of 5% is considered to be high by international standards. One of the options under consideration by the Government is to reduce such rate by 50% and phase in this new rate over a period of time. A portion of the royalty payment would be made a deductible from the income tax. The result of this provision would reduce the attractiveness of smuggling, or other forms of evasion, and would provide an incentive to declare profits.

Several international companies are actively involved in the Guyanese mining industry. (*See table 2.*) The private sector dominated the production of gold and diamonds. Five companies held large-scale mining licenses. There were also about 20 prospecting licenses for gold and precious stones and a number of license applications on file. Local subsidiaries of private foreign firms carried out petroleum exploration, with little discernible success.

Besides its minority interest in Omai, GSRL was pressing the exploration of its placer deposit concession near Mahdia. South American Goldfields, which had owned the Peter's Mine, Akaiwong, Aurora, Five Star, and Quartz Hill properties, merged with GSRL. Sutton Resources Ltd. of Vancouver, British Columbia, pressed its drill work on the Marudi Hill prospect in southern Guyana. During 1996, GSRL also continued work on its alluvial diamond evaluation program at Red Hill Loop, Eping, and Apaikwa.

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

Guyana has diversified the formerly bauxite-oriented mineral industry by its 7-year gold and diamond promotion program. The intensive, internationally funded exploration activity has resulted in augmented gold production, which is expected to be

sustainable into the next century. Large-scale gold operations, such as those of the Omai Mine, would significantly strengthen Guyana's economy.

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Major Sources of Information

- Bauxite Industry Development Co. Ltd. (BIDCO)
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TABLE 1
GUYANA: PRODUCTION OF MINERAL COMMODITIES 1/

Commodity 2/		1992	1993	1994	1995 e/	1996 e/
Aluminum: Bauxite, dry equivalent, gross weight	thousand metric tons	2,380	2,130	2,100 e/	2,100	2,100
Diamond	carats	44,800	50,000 3/	50,000	50,000	50,000
Gold, mine output, Au content	kilograms	2,475	9,614	11,811	9,331 r/	12,441 r/
Stone, crushed e/	metric tons	72,500 3/	75,000	136,000	136,000	136,000

e/ Estimated. r/ Revised.

1/ Includes data available through Apr. 1997.

2/ In addition to the commodities listed, a variety of crude construction materials (clays and sand) and semiprecious stones were also produced. Available information was inadequate to make an estimate of production.

3/ Reported figure.

TABLE 2
GUYANA: STRUCTURE OF THE MINERAL INDUSTRY FOR 1996

(Thousand metric tons, unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Bauxite	Guyana Mining Enterprise Ltd. (Guymine) (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%) (Guymine contract)	Kwakani area	500
Do.	Green Mining Inc. (Green Construction Co., United States, 100%) (Guymine contract)	Dacouria Mine, Linden	NA
Do.	Aroaima Mining Co. (Government, 50%; Reynolds International, United States, 50%)	Aroaima, East Berbice District	1,500
Alumina	Guymine	Alumina refinery at Linden (presently closed)	300
Gold	kilograms Omai Gold Mines Ltd. (Cambior Inc., Canada, 65%; Golden Star Resources, Canada, 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.