

THE MINERAL INDUSTRY OF FRENCH GUIANA

By Alfredo C. Gurmendi

French Guiana with an area of 84,000 square kilometers (km²) and some 130,000 people, located on the Guiana Shield, is rapidly becoming an attraction for gold exploration and mining and diamond prospecting in South America. Because French Guiana is a French Overseas Department, the mining laws and regulations of France prevail in the country. The French law requires that a company must be incorporated in France; that two-thirds of its Board of Directors must be European Union citizens; and to obtain a mineral exploration and production permit, it must apply for a "Autorisation Personnelle Minière" (PMA-Personalized Mining Authorization).

The Ministry of Industry's Direction Régionale de l'Industrie, de la Recherche et de l'Environnement (DRIRE) is responsible for the minerals exploration permitting process, assessing applications and awarding mineral exploration and production titles. A referral from the DRIRE to the Bureau de Recherches Géologiques et Minières (BRGM) of France is necessary to obtain access to the public records of geological mapping and mineral inventory studies in French Guiana (Mining Journal, 1995).

Although the main mine output was gold, the value of production amounted to about 4% of the total gross domestic product of almost \$900 million¹ in 1996. Primary gold occurs in the well-known Precambrian shield area shared by French Guiana with northern Brazil, Guyana, Suriname, and southeastern Venezuela, but more than 90% of the gold produced in 1996 came from placer operations. Recently, however, exploration activity began to probe the greenstone belts of the Precambrian shield, which in Canada and elsewhere are thought to be the most mineralized parts of the old shield rocks.

The BRGM completed the mineral inventory of the "North Guiana Trough." In addition to the gold resources, it has evaluated bauxite deposits in the mountains of Kaw and Roura, southeast of Cayenne. Exploration for platinum-group metals in the southern massifs proved negative. Minerals with potential economic value include diamonds, columbium-tantalum, and kaolin.

Guyanor Ressources S.A. (Guyanor) operates entirely in the French Department of Guyane (French Guiana) and is focused on the prospection, exploration, and development of mineral deposits, in particular gold and diamonds. Guyanor currently

holds interests in the Dorlin, Paul Isnard, Régina Est, St.-Elie, and Yaou gold properties as well as the Dachine (Inini) diamond property (Mining Journal, 1996). Golden Star Resources Ltd. (GSRL) of the United States has about 70% interest in Guyanor. LaSource Development S.A. (LaSource) is a French subsidiary of the LaSource Group owned by the BRGM and Normandy Mining of Australia.

Guyanor and LaSource entered into a joint-venture agreement for the exploration and potential mining of the primary gold deposits on the Paul Isnard and Eau-Blanche properties. Under the agreement, LaSource holds a 25% interest in Paul Isnard, excluding any alluvial gold deposits. ASARCO Incorporated (Asarco) of the United States has an option to acquire 50% of Société de Travaux Publics et Mines Aurifères en Guyana (SOTRAPMAG)'s interest, representing at this time a 37.5% interest, by spending \$10 million on exploration leading to a feasibility study within a 5-year period on either the Paul Isnard or Eau-Blanche part of the property. Asarco also has the option to explore both properties for a 5-year expenditure of \$20 million (Canada News Wire, unpub.data accessed June 25, 1996 on World Wide Web at: CNW:<http://www.newswire.ca:80/releases/June1996/12/c1895.html>). Guyanor will act as project manager for exploration, and Asarco, once vested, will act as manager of any resulting feasibility study and potential mining. The owners of the Paul Isnard concession, SOTRAPMAG, is a wholly owned subsidiary of Guyanor. Paul Isnard's alluvial operation with considerable potential for expansion is located on the Northern Greenstone Belt and 75 kilometers (km) south of Saint Laurent du Maroni. Alluvial gold is currently recovered by five washing plants located at Barthelemy, Citron, Petit Léopard, Reine Creek, and Topaze Creek.

The St.-Elie concession is currently under transfer to a joint venture between Guyanor and Asarco's subsidiary Asarco Guyane Francaise S.A.R.L. In February 1995, Société des Mines de St.-Elie was constituted and it is owned 50% by each partner to operate St.-Elie. St.-Elie is in the north-central region of the country and 110 km west of Cayenne. Asarco is committed to spend \$10 million over a 5-year period to complete a feasibility study and will fund all costs required to develop the St.-Elie property.

Dorlin is in southwestern French Guiana, about 50 km east of Yaou. Exploration drilling in Dorlin should be completed by yearend 1997, which will determine the extent of its mineralization. BRGM penetrated a significant thickness of the intrusive, which contained copper-bearing sulfides. Guyanor is analyzing the core drill samples for base metals because BRGM

¹Where necessary, values have been converted from French francs (F) to U.S. dollars at the rate of F5.9243=US\$1.00.

assayed them only for gold. Guyanor, GSRL, and the Canadian companies Cambior Inc. (Cambior) and Cambiex Exploration Inc. (Cambiex) have interests in the Dorlin gold property. Cambior is currently funding exploration under the existing joint-venture agreement, which allows Cambior to earn a 50% interest in the project. Under a separate agreement with Cambior, Cambiex has a right to earn 30% of Cambior's share.

Yaou comprises six tracts of 25 km² each and is located 210 km southwest of Cayenne. Guyanor acquired this property from BHP Minerals International Exploration Inc. (BHP) and BRGM in 1994. GSRL and Cambior entered into an option agreement whereby Cambior may acquire a 50% interest in Yaou and Dorlin properties by spending \$11 million by June 30, 1998. When the joint venture is exercised, Guyanor will manage exploration and Cambior will prepare a feasibility study and manage mining operations.

Dachine is in southwest French Guiana, approximately 30 km east of Dorlin project. In December 1995, BHP entered into an agreement with Guyanor to earn a 51% interest in the Dachine project by spending \$3.5 million by June 1998. BHP is currently managing the exploration of the diamondiferous body, which petrographically is a talc-schist, interpreted as being a meta-kimberlite or meta-lamproite rock type, hosted in metavolcanics and volcanoclastics. The Dachine prospecting permit was expected to be approved by mid-1997.

There are additional important gold prospects, the Espérance, in the extreme western part of French Guiana, 100 km south of Saint-Laurent-du-Maroni; the Régina East, 80 km south-southeast of Cayenne; and the Sophie-Saül, which is located in the Central Greenstone Belt and is currently being evaluated by a joint venture between KWG Guyane (KWG) and the BRGM. KWG is a wholly owned subsidiary of Franc-Or Resources Corp. (FORC) of Canada. FORC has an 80% interest in the 121.5 km² Sophie-Saül concession.

Gold had been mined at a number of placer sites in the interior since 1853. Columbite and tantalite also are produced from alluvial deposits. Sand is dredged from the major rivers in the western region of the country, primarily the Mahury and the Maroni. Stone is quarried at Cayenne and to the southeast of Kourou. (See table 1.) Guyanor as a French corporation was issued an PMA to hold exploration permits, mining licenses, and mining concessions in the country. Guyanor and the Chamber of Commerce and Industry of French Guiana issued a "Declaration of Principle" to facilitate Guyanor's activities in the country, benefiting both interests.

France dominates French Guiana's trade, accounting for more than 50% of total imports and exports. Most of the gold produced is exported to France. Sand and stone are consumed by the local construction industry. The country depends on imports for its other mineral requirements, especially cement and fuels, which are shipped through the port at Cayenne.

Interests in gold mining and diamond prospecting are expected to grow further as increasing numbers of companies and investors from Australia, Canada, France, South Africa, and the United States focused on gold and diamond opportunities in French Guiana as well as in adjacent Brazil, Guyana, Suriname, and Venezuela.

References Cited

Mining Journal, 1995, Guyane Golden d'Or Country Supplement: June 2, 1995, v. 324, no. 8329, p. 1-16.
)))))) 1996, Industry in Action: October 25, 1996, v. 326, no. 8403, p. 325.

Major Sources of Information

Direction Régionale de l'Industrie, de la Recherche et de l'Environnement

Impasse Buzaré

B.P. 7001

97307 Cayenne, French Guiana

Telephone: (594) 300006; Fax: (594) 319777

Chamber of Commerce and Industry

Place de l'Esplanade

B.P. 49

97321 Cayenne, French Guiana

Telephone: (594) 299600; Fax: (594) 299634

Préfecture de French Guiana (Guyane)

Place de l'Esplanade

97300 Cayenne, French Guiana

Telephone: (594) 394509; Fax: (594) 301700

Conseil Régional

66 Avenue Général de Gaulle

97300 Cayenne, French Guiana

Telephone: (594) 305555; Fax: (594) 319522

Union Patronale de French Guiana (Guyane)

SOFIDEG - 3 km Route de Baduel

B.P. 820

97338 Cayenne Cedex, French Guiana

Telephone: (594) 311771; Fax: (594) 303213

Major Publications

BRGM, Chronique de la RECHERCHE MINIERE, no. 518, Orléans Cedex 2, 1995.

Gédim (Paris, France): Réalités Industrielles, Annales de Mines, monthly.

LAMI, The South American Investment and Mining Guide. French Guiana Update-011-March 1995.

The Mining Journal Ltd., Country Supplement, Information Sources, 60 Worship Street, London EC2A2HD, monthly.

TABLE 1
FRENCH GUIANA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/

Commodity		1992	1993	1994	1995	1996
Clays	metric tons	5,000	5,000	5,000	5,000	5,000
Columbite and tantalite	kilograms	1,100	1,100	1,100	1,100	1,100
Gold, mine output, Au content 2/	do.	2,140	2,800	2,270	3,000	3,000
Sand	thousand tons	1,000	1,000	1,500	1,500	1,500
Stone, crushed	do.	1,400	1,400	1,500	1,500	1,500

1/ Includes data available through Apr. 1997.

2/ Reported figure.

Source: Direction Regionale de l'Industrie, de la Recherche et de l'Environnement.