

# THE MINERAL INDUSTRY OF FRENCH GUIANA

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French Guiana (Guyane) has been an Overseas Department of France since 1946 and is closely tied to France through trade, which accounted for more than 50% of total imports and exports. In 1998, the main mineral produced was alluvial gold, about 3 (t), the value of which amounted to about 3% of the estimated gross domestic product of almost \$900 million.<sup>1</sup>

Primary gold occurred in the Precambrian Shield area.

However, most of the gold produced (official and unofficial production) came from placer operations. Placer gold has been mined and smuggled from sites in the interior since 1853 (Mining Journal, 1997, p. 2; Mining Journal, 1998, p. 20). Most of the gold produced was exported to France.

The minerals sector continued to be administered according to French law. The granting of permits and concessions for minerals is administered by a branch of the Ministry of Industry, Finances and Economy known as the Direction Régionale de l'Industrie, de la Recherche et de l'Environnement (DRIRE). To acquire a mining title through DRIRE, a company must first obtain an Autorisation Personnelle Minière (APM). APM requires that a company must be incorporated under French law, have an office and address in Guyane, and to have a board of directors comprising nationals of European Union countries. APM grants a company the right to hold permits and concessions for minerals exploration and production, respectively. Gold producers are no longer required to sell to the Government; they may sell it in the open market (Mining Journal, 1997, p. 8).

Groupement des Sociétés Minières de la Guyane (GSMG) was a new voice for the mineral exploration and mining companies active in Guyane. GSMG was the National Mining Association of French Guiana, which was mostly composed of larger Guyanais and international mineral firms. GSMG also advised the Préfecture of the country on matters of common interest to the Government and all operating mining companies in the country. Issues of concern to the GSMG included the new mining code, taxes on fuels and on gold production (Mining Journal, 1997, p. 20).

Modern exploration techniques were being used to probe the greenstone belts of the Guiana Shield. Particularly active were Denver-based Golden Star Resources Ltd. (GSRL) through its 71% owned subsidiary, Guyanor Ressources S.A. Guyanor was incorporated under French law and listed on the Nouveau Marché of the Paris stock market (White, 1997). GSRL and Guyanor were focused on the prospection, exploration, and development of mineral deposits, in particular gold and diamond. They held interests in the Dorlin, Paul-Isnard, St-

Elie, and Yaou gold projects, as well as the Dachine diamond property (Golden Star Resources Ltd., 1998, p. 3).

Guyanor and Cambior Inc. of Canada have formed a French mining firm, Société Minière Yaou Dorlin S.A. (SMYD), in which each had a 50% interest. SMYD filed two mining concessions for the Dorlin and Yaou gold deposits, which cover 84 and 52 square kilometers, respectively. SMYD was conducting environmental impact assessments and feasibility studies for future exploitation of both properties (Canada NewsWire, April 14, 1999, Guyanor, Cambior update, accessed April 14, 1999, at URL <http://biz.yahoo.com/rf/990414/mx.html>). Dorlin and Yaou are mineable by open-pit. Dorlin totaled 8.5 million metric tons (Mt) of measured and indicated reserves grading 1.3 grams per metric ton (g/t) of gold and about 16.8 Mt grading 1.2 g/t as an estimated geologic resource. Similarly, the Yaou deposit contained 11.2 Mt grading 2.2 g/t gold, and its geologic resource was reported to be about 18.8 Mt grading 2.0 g/t gold. For these estimates, a gold price of \$400 per ounce was assumed, and at \$350 per ounce, the tonnages declined by about 20% and 12%, respectively. Dorlin and Yaou are scheduled for a final feasibility study by 1999 (Mining Journal, 1997, p. 11-12).

In May 1998, New York-based ASARCO Incorporated terminated its joint-venture agreement with Guyanor. They were exploring St-Elie/Dieu-Merci and Paul-Isnard/Eau-Blanche concessions. St-Elie/Dieu-Merci was owned by Société de Travaux Publics et Mines Aurifères (Sotrapmag) in Guyane, where 20,000 cubic meters of mineralized alluvial material grading 4 grams per cubic meter of gold was delineated (Mining Journal, 1998, p. 20).

Sotrapmag's Paul-Isnard alluvial operation, in the Northern Greenstone Belt, located 75 kilometers south of Saint Laurent du Maroni, was considered to have a potential for expansion. Alluvial gold was recovered by five washing plants located at Barthelemy, Citron, Petit Léopard, Reine Creek, and Topaze Creek. Paul-Isnard's gold reserves, based on a \$350 per ounce of gold, were about 16.8 Mt grading 1.9 g/t, representing some 32.2 t (1.04 million ounces) of contained gold (Golden Star Resources Ltd., 1998, p. 1).

Guyanor's Dachine diamond property in the southwest, appears to be promising, where 9,000 microdiamonds from 1.2 t of samples were reported, and the host rock is talc schist (Mining Journal, 1997, p. 18).

In French Guiana, alluvial deposits continued to be the main sources (in order of importance) of gold, columbite, and tantalite. Sand is dredged from the major rivers in the western region of the country, primarily the Mahury and the Maroni. Stone was quarried at Cayenne and to the southeast of Kourou.

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

(See table 1.) Sand and stone continued to be consumed by the domestic construction industry; the country, however, depended 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 decreasing because of current metal market conditions, economic contraction in the region, and foreign companies and investors involvement are of a lesser degree on gold and diamond activities in French Guiana, as well as in the rest of the Guiana Shield. The current geologic target is, however, sedimentary gold, not greenstones, and that because the best gold occurrences are being found in the younger sediments (Mining Journal, 1997, p. 9).

### References Cited

- Golden Star Resources Ltd., 1998, Golden Star Resources announces restated reserves and mineralized inventory and a year-end financial update: [Denver, Colorado], Golden Star Resources Ltd. press release, November 17, 4 p.
- Mining Journal, 1997, Guyane—A primary target for exploration: Mining Journal [London], Country Supplement, v. 329, no. 8448, September 26, 20 p.
- 1998, French Guiana: Mining Journal [London], Country summaries, v. 330, no. 8470, March 6, p. 23
- White, Lane, 1997, Golden Star Resources—A major minerals explorer: Engineering & Mining Journal, v. 198, no. 7, p. 18-22.

### Major Sources of Information

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### Major Publications

Bureau de Recherches Géologiques et Minières, Chronique de la Recherche Minière, no. 518, Orléans Cedex 2, 1995.

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

The Mining Journal Limited, 60 Worship St. London EC2A2HD, Great Britain: Mining Journal, monthly.

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

Commodity		1994	1995	1996	1997	1998
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	do.	2,270 2/	3,000 2/	3,000 2/	3,000 2/	3,000 2/
Sand	thousand tons	1,500	1,500	1,500	1,500	1,500
Stone, crushed	do.	1,500	1,500	1,500	1,500	1,500

1/ Includes data available through April 1999.

2/ Reported figure.

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