THE MINERAL INDUSTRY OF

PANAMA

By David B. Doan

Mining accounted for less than 0.5% of Panama's gross domestic product (GDP). The Panama Canal dominated the economy, generating about 30% of its GDP. However, gold and silver were mined, as were industrial minerals, such as cement materials, clays, limestone, salt, and sand and gravel for domestic use. (See table 1.) The country anticipated receiving control of the Panama Canal on December 31, 1999, as the result of the 1977 treaty between Panama and the United States. Because the U.S. dollar was Panama's currency, monetary policy was essentially determined by the United States, with fiscal policy the only macroeconomic policy instrument available to the Government of Panama.

The Panamanian constitution specifies that all mineral deposits are the property of the State. Panama's mining law, updated in 1988 to modernize the code and stimulate investment, provides the following: (1) foreign companies are allowed a 4-year exploration concession to prospect for minerals with two 2-year extensions, (2) extraction concessions are granted for specific mineral classes for a period of 10 years (alluvial precious minerals), 20 years (nonalluvial precious minerals), and 25 years (all other minerals), and all are extendable, (3) extraction concessions normally are granted if exploration is successful, (4) mine production royalties have been reduced to 2% of gross production for base metals and nonalluvial precious metals and 4% for placer precious metals, (5) import duties on capital equipment are waived, and (6) minerals produced may be exported freely, exempt from duties. No restrictions are placed on foreign ownership or repatriation of capital, other than a 10% tax on dividends or interest payable to foreign shareholders. Mining companies pay an income tax that is reduced by operating expenses, depletion allowance, and depreciation, which can be accelerated (Latin American Mining Institute, 1993, p. 17-24). Private companies operated most of the mineral industries in Panama, although the Government held 40% of Petroterminal de Panama, S.A., the owner of the crude oil transshipment and pipeline activity associated with the canal. The United States was Panama's largest trading partner and Panama was the third largest site of U.S. investment in Latin America, after Mexico and Brazil. Mineral-related exports consisted primarily of scrap metal and petroleum products.

Three large copper deposits, two in the Petaquilla-Botija district and one elsewhere in the Cerro Colorado district, continue to attract attention. Petaquilla, among the world's five largest undeveloped copper-gold porphyry deposits, with the nearby and somewhat smaller Botija deposit, had reserves estimated at 495 million metric tons (Mt) grading 0.53% copper and 0.124 gram per metric ton gold, at a 0.19% copper-

equivalent cutoff. Owned 52% by Adrian Resources Ltd. and 48% by Inmet Mining Corporation (of Canada), Petaquilla and Botija, combined with eight other prospects in the concession, were projected by Adrian to include 3,840 Mt containing 31.8 billion pounds (14.4 Mt) of copper, 9.8 million ounces (300 t) of gold, and 962 million pounds (436,000 t) of molybdenum. Teck Corporation (also Canadian) worked on a feasibility study through 1997 with the object of buying half of Adrian's 52% ownership at the point of an expected mining decision in March 1997 (Rose Davidson, Adrian Resources Ltd., oral commun., 1997). Teck's work had to be extended into mid-1998 because of the effect of depressed copper prices on the final and bankable feasibility of start-up; Teck gave notice that the mining decision would be postponed for 1 year (until mid-1999). However, in anticipation of an eventual production decision, Minera Petaquilla, the joint operating company owned by Adrian, Inmet, and Teck, purchased the land for a port site and posted a \$3 million performance bond with the Government in order to secure Minera Petaquilla's commitment to carry out the minimum investment of \$400 million required under the contract law (Adrian Resources Ltd., May 14, 1998, Adrian Resources update on Petaquilla project, press release, accessed May 15, 1998, at URL http:// biz.yahoo.com/bw/980514/ adrian res 1.html).

Feasibility studies continued on Tiomin Resources Inc.'s Cerro Colorado copper property where a projected sulfide body comprised 1.75 billion tons of contained copper grading 0.64% or better. Near the end of the year, in return for providing Cerro Colorado's owner, Tiomin Resources, with a \$2 million loan, Aur Resources (Canada) optioned the property for purchase within 26 months (Mining Journal, 1999).

After bringing its Santa Rosa gold concession, 1 kilometer south of Canazas, Veraguas Province, into production, Greenstone Resources Ltd. (Canada) had continuing though temporary difficulties with rainwater dilution of its leach pad. The operation did produce more than 1,300 kilograms of gold in the first 9 months of the year (Greenstone Resources Ltd. 1998).

Manganese deposits were known in several areas in Panama. Caribbean Mining Company Inc. (United States) had a 25-year mining concession to mine at La Soledad in Colon, where reserves were estimated to be 1 Mt. The company had been interested in negotiating a similiar concession at the CerroViejo Mine, northeast of Colon, containing an estimated 600,000 metric tons of reserves (U.S. Embassy, Panama City, Panama, 1993). No production has since been reported in either case.

Panama produced cement, clays, lime, limestone, marine

salt, and sand and gravel in small operations. Cement was produced by Empresa Estatal de Cementos Bayano at Calzada Larga, and by Cemento Panama, S.A., at Quebrancha. In 1994, the Government sold its 95% share in Cementos Bayano to Mexico's Cementos Mexicanos S.A. A 5% share was sold to employees as part of the country's new pension plan (Journal of Commerce, 1994).

In Panama, crude oil for its refineries was imported from Ecuador, Mexico, Saudi Arabia, and Venezuela. Electrical capacity was rated at 935 megawatts (MW) nationally, about 65% of which was hydroelectric. Private companies were allowed to bid on a contract to build and operate a new 50-MW plant to supply electricity to the country's grid. AES Corporation, a U.S. company, announced late in the year that it was buying a controlling interest in two Panamanian hydroelectric generating companies and would increase the country's total capacity to 1,067 MW (AES Corporation, November 18,1998, AES wins bid for controlling interest in two hydroelectric generating companies in Panama for \$91 million, press release, accessed November 19, 1998 at URL http://biz.yahoo.com/bw/981118/ aes 1.html). A geothermal energy region in southwestern Panama of at least potential significance to energy supply has not been exploited.

Investment in mining was expected to offer strong opportunities for expansion of capital in Panama. The country was positioned not only to become a major producer of copper, but also of gold as a coproduct of the copper. Production of manganese was likewise a reasonable possibility. In the meantime, however, the reversion of the Panama Canal to domestic control remained the focal point of principal commercial interest in Panama.

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Major Sources of Information

Direccion General de Recursos Minerales Ministerio de Comercio e Industrias P.O. Box 8515, Panama 5, Panama

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Direccion de Estadistica y Censo, Panama: Panama en Cifras, annual.

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${\bf TABLE~1} \\ {\bf PANAMA:~ESTIMATED~PRODUCTION~OF~MINERAL~COMMODITIES~1/~2/} \\$

(Metric tons unless otherwise specified)

Commodity		1994	1995	1996	1997	1998
Cement		615,000 3/	615,000 3/	647,000 3/	700,000 r/	750,000 3/
Clays:						
For cement		400,000	300,000	117,616 3/	40,112 3/	45,000
For products		7,250	7,000	5,170 3/	7,217 3/	7,200
Gold	kilograms	245	1,100	834 3/	1,202 3/	1,500
Lime		1,750	2,000	6,767 3/	3,246 3/	3,500
Petroleum refinery products	thousand 42-gallon barrels	10,000	10,000	10,000	10,000	10,000
Salt, marine		20,000 3/	22,000	22,000	22,000	22,500
Silver	kilograms	175	175	1,307 3/	2,178 3/	2,000
Stone, sand and gravel:						
Limestone:						
For cement		700,000	700,000	550,798 3/	263,338 3/	270,000
For other uses		57,000	62,000	62,000	62,500	62,500
Sand and gravel	thousand tons	2,700	3,000	3,000	3,000	3,000
Sand and silica		22,500	23,000	23,000		

r/ Revised

 $^{1/\}operatorname{Estimated}$ data are rounded to three significant digits or less.

^{2/} Includes data available through June 1, 1999.

^{3/} Reported figure.